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Advanced MD04

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Content

1 Advanced MD04. 3

2 Main Functions. 5

2.1 Selection. 5

2.2 Results Tables. 7

Stock/Requirements List. 8

Period Totals. 10

2.3 Application Toolbar. 10

2.4 Information Popups. 11

Demand-Driven Planning (DDP). 13

Theory of Constraints (TOC). 14

2.5 Alternative Calculation of Plant Stock. 15

Storage Location Stocks. 15

Batch Stocks. 17

3 User Settings / Customizing. 21

3.1 Renaming of MRP Elements. 22

3.2 Further setting options for data formatting. 23

4 Business Add-Ins (BAdIs). 24

4.1 Advanced MD04-Specific BAdIs. 24

4.2 Single-Use Standard BAdIs. 24

5 S/4HANA Exclusive Functions. 25

5.1 ePP/DS Integration. 25

Overview. 25

Prerequisites. 25

Configuration. 25

Selection Screen Extensions. 27

Main Screen. 28

Popup Extensions. 30

PP/DS Popups. 33

Simulation Mode. 36

5.2 Information Popup Demand-Driven Replenishment (DDMRP). 37

6 MD4 Consulting Support. 38

1 Advanced MD04

Simplify your MRP postprocessing and error processing.The **advanced MD04** supports your workflow with fast and simple navigation, fewer click-intensive processes, and additional statistics and analyses compared with the original.

The main functions of this **SCM Consulting Solution** are:

- Advanced version of stock/requirements list with additional data and functions
- Execution of important processing steps such as conversion or quantity and date/time changes with minimum effort
- Display of key master data, material consumption, statistics, key figure flows, and demand-driven replenishment information in various navigation dialog boxes, which can be used on different monitors in parallel to the main screen.

For this **SCM Consulting Solution**, the following note exists: 2527226

You can create error messages under this component: `XX-PROJ-CON-MD4`

> **Note**
>
> Please note that when executing **SCM Consulting Solutions**, you must enter the prefix */n/SAPLOM/* before each transaction.

You can also use the **comprehensive functions**. These include the following functionalities:

- Tasks and resubmissions
- Comment function
- Individual material groups
- Alerts
- Formula editor for creating your own formulas
  You use the formula editor to create your own formulas to calculate your own key figures. The formulas can be used in all SCM consulting solutions.

In addition, the following **SCM Consulting Solutions** are part of the **comprehensive functions**:

- **Material master update**
- **Enhanced material master view**
- **Material Document Analysis**
- **Excel Upload/Download**
- **Flexible Material Master Update**

The **comprehensive functions** consist of various functions that can make your work with the **SCM Consulting Solutions** even more effective.The material master update allows you to save data in standard SAP fields and fields of the **enhanced material master view**. You can edit the material master data directly from the results list of your SCM Consulting Solutions.You can use the **enhanced material master view** to access the material master data fields of the **SCM Consulting Solutions**. You can use **material document aggregation** to create customized consumption and inventory histories that you can use for the analyses in the **MRP monitor**,

inventory controlling cockpit, and **safety stock and buffer simulation**. The **stock development** shows you the current stock values and provides you with a variety of aggregation options.

Related Information

Documentation on the **comprehensive functions**
Overview of **SCM Consulting Solutions**

2 Main Functions

Use **Advanced MD04** to not only display an enhanced version of the stock/requirements list, but also to change demands/consumptions and dates quickly and easily! The Advanced MD04 supports your workflow with many navigation options, shortcuts, and fewer click-intensive processes than the original version.

The **advanced MD04** is an integral part of the SCM Consulting Solutions and serves as an add-on program for the SAP ERP system. You can use transaction **/SAPLOM/MD04** to call it.

Important Features:

- Execution of important processing steps such as conversion or quantity and date changes with a minimum number of steps required in the system (clicks), or can be maintained directly in the MD04 columns
- Display of important information such as order value, source of supply, and so on directly on the MD04 main screen without first needing to branch to the details
- Display of period totals and the single element view on one screen
- Interactive filtering by material/plant/MRP area and MRP elements with a simple click
- Display of exception messages even for issues with a lower priority
- Option to display prioritized checklists for exceptional situations
- Visualization of thresholds important to MRP, such as the replenishment lead time and total replenishment lead time for each MRP element
- Option to enter cross-material or cross-plant with multiple objects
- Display of key master data, consumption data, statistics, key figure flows, MRP elements (aggregated, separate) in up to 7 different navigation popups that can be located on different monitors, thereby simplifying navigation
- Demand-Driven Planning (DDP) and Theory of Constraints (TOC) are supported and can be purchased as additional functions for Advanced MD04. For more information, see the DDP and TOC sections.
- Personalization options via user settings

Related Information

Demand-Driven Planning (DDP) [page 13]
Theory of Constraints (TOC) [page 14]

2.1 Selection

The Advanced MD04 selection screen is located on the main screen, above the results table. It consists of four different blocks:

- *Material Selection*
- *Material Criteria*
- *Settings*
- *Historical Data*

Material Selection

You can select any number of material/plant/MRP area combinations for which data is to be loaded.

Material Criteria

This block consists of four tabs:

- *Grouping*
- *Classification*
- *Lifecycle / Stockholding*
- *Exception Indicators*

You can use the second block independently of the first for the selection - it is not necessary to select materials in the first block to restrict them with the second block. For example, this enables you to search by procurement type only.

> **Note**
>
> When selecting materials by project number (WBS element), it is imperative to limit the material selection with additional criteria, e.g. plant and MRP controller. The scope of analysis is determined as follows. Based on, for example, plant and MRP controller, the initial material scope and their stock/requirements lists are selected. Materials where the selected project does not appear in their stock/requirements lists are removed from the analysis scope. Only materials remain in the scope of analysis where the selected project appears in their stock/requirements lists.

Settings

You can choose whether to specify the display filter, selection rule, and planning scenario here. For the display filter, you can also use the button to the right of the input field to configure the display horizon and additional selection. You can also force the system to fill the additional fields. If you have implemented the BAdI MD_ADD_COL_EZPS to display batch information in MD04, for example, you can effect the execution of the BAdI by activating the checkbox. You can find the values in the three user exit fields in the results list.

If you activate the checkbox *Display MRP element/statistics popups by planning segment*, many of the key figures within the mentioned popups will be displayed separated by the planning segment.

Under *Alerts*, you can specify an alert profile with which you can display alerts (green, yellow, red traffic light) and/or fill rows or cells with color on the main screen according to defined conditions. For details about configuring an alert profile, see the user documentation for the comprehensive functions under Alerts.

If TOC is used, you can make the setting for alternative shift logic and the selection for additional capacity loads here. If TOC is not used, the two options are not available. For more information, refer to the TOC section.

The *overall profile* allows you to combine various general functions into a single profile. Currently, the advanced MD04 monitor supports the function of the *action flows*, *proposals management*, the layout set, the alerts, and the grouping of documents in the overall profile by specifying an expand and collapse profile. For details on the configuration of an overall profile, see the user documentation for the comprehensive functions under Overall

Profile, for an action flow under Action Flows, for proposals management under Proposals Management, for the layout set under Layout Sets, for the alerts under Alerts, and for the expand and collapse profiles under Data Preparation.

If after material selection you want to execute an action sequence based on the material list, enter the desired action flow in the field *Sequence (Before Execution)*.

In the *Layout* field, you can define a default layout that is applied automatically.

You can use the *book of reports* to export selected data of the advanced MD04 monitor to Excel. For details on configuring the book of reports, see the guide for the configuration of the comprehensive functions under General Report Folder.

Historical Data

If you want to read historical data, a stock/requirements list must be saved in advance. Use `/SAPLOM/XMD` for this purpose.

In the XMD settings for data storage, select the options *Save Header Data*, *Save Raw Data*, *Save Formatted Data*, and *Save Period Totals*, and set the period indicator to the same as the periodicity that you use as standard or most frequently in the totals display in the lower table on the results screen. Using the Creation Date field, you can load the data for a specific day. If the field remains empty, the most recent historical data record is loaded for the selected materials. You can use the selection ID to save different historical data for one day for each material. This means that historical data can be created at different times on the day (for example, before or after the MRP run).

For more information on transaction `/SAPLOM/XMD`, see the documentation for the comprehensive functions under Save current stock/requirements list.

Related Information

Save current stock/requirements list
Theory of Constraints (TOC) [page 14]
Alerts
Layout Sets
Action Flows
Overall Profile
General Report Folder

2.2 Results Tables

After loading the data from your selection, the **advanced MD04** displays the results in two different tables on the main screen. The upper table is the stock/requirements list, the lower table shows the period totals.

Use the slider between the two tables to configure the ratio between them.

2.2.1 Stock/Requirements List

The table above displays the stock/requirements list. However, the **advanced MD04** list has been enhanced with additional data and features compared with the standard, including the total value, currency, vendor name, and supplier name, for example. Lots of information, which was previously only available by opening a popup, is now visible directly in the main table.

The table also displays the last action that you performed.

Branching to the individual elements is now realized via a hotspot in the column *MRP Element Data*.

In contrast with the standard stock/requirements list, the second exception is displayed in addition to the first exception. When you click on any exception, a popup appears with prioritized processing suggestions for this exception number, which can be maintained in Customizing.

In the new column *RLT Status*, either a green, yellow, or red icon is displayed.

- If the material is within the replenishment lead time, a red icon is displayed.
- If it is outside of the RLT, but within the total RLT, a yellow icon is displayed.
- If it is outside of the total RLT, a green icon is displayed.

One of the most important advantages of the **advanced MD04** compared with the standard MD04 is the direct processing of requirements/receipts and start/end dates in the results table. You can maintain MRP elements in two different ways, as described below.

On the one hand, you can edit the white editable cells directly. In the corresponding entries, choose the white cells that can be edited, and enter a new value to change it directly. Multiple changes can be collected and executed at the same time. Choose **Enter** to execute the changes made. Alternatively, select several lines/MRP elements and while holding down the CTRL key, double-click the header of the column for which you want to make changes, for example, the column Receipt/Reqmt. A popup window appears, in which you enter the new quantity that is adopted for the selected MRP elements, and choose Enter to confirm. A dialog box then informs you of which changes have been made.

On the other hand, you can download the table to Excel, edit the columns that would also be editable in the SAP system, and then upload the table again. The application toolbar in the detail views contains two pushbuttons for this purpose. For further details on the Excel upload/download function, see the documentation for the **comprehensive functions**, under Excel Upload/Download.

You can also convert an MRP element directly from the results table. For each type of conversion (for example, purchase requisition or purchase order), there is a column with a button that starts the conversion process. Navigate to the desired MRP element and choose the button in the corresponding column to convert the element.

You can use the corresponding pushbuttons to maintain **tasks**, a **resubmission date**, and **comments** with reference to a selected task object. In the material view, task objects can be, for example, plant, material number, or MRP controller, and in the detail view for purchase orders, task objects can be, for example, purchase order number. As soon as you change the task object, tasks, resubmission dates, and comments created with reference to the selected object are displayed. When you create a new task, resubmission date, or comment, the object is preset accordingly.

To document a task for one or more material numbers, select the *Task* pushbutton. You can then create a task with reference to the selected object.

To create a resubmission or comment, select the *Resubmission* and *Comment* pushbuttons.

For more information on this, see the user documentation for the comprehensive functions under Tasks, Resubmissions, and Comments on the Results Screen.

Using the menu button *Set Processing Indicator* you can set the processing status of a document to new, processed or on hold. With the *Filter by Processing Indicator* button you can filter documents in the list of documents by a selected processing status. The output list displays the following columns: processing indicator icon and text, date of last processing and reasons for reset. The processing indicator icon and text show the processing indicator that has been assigned to the document. The date of last processing shows the date when the processing indicator was assigned. The status of a processed document can be automatically reset to the status new, if the there is a change in quantity, (rescheduling) date or exception message. The reasons for reset column displays the reasons why the processing indicator was reset to the initial status new. For automatic reset, you need to regularly execute report /SAPLOM/XMD, e.g. every night after the MRP run, with the corresponding data processor that compares the current with the past stock/requirements list in order to detect above-mentioned changes and reset the processing indicator.

The *Available Quantity* is numbered per material/plant/MRP area combination, which can cause confusion when selecting more than one combination. The **advanced MD04** contains a second column in addition to *Available Quantity*. Choose the *Calc. Avail. Qty* button in the toolbar at the top of the results table to number the *Available Quantity* only for the visible, unfiltered elements in this second column and therefore enable cross-plant calculation as well, for example.

Navigation in the Results Table

There are various additional functionalities that support you in navigating through the results table.

- Double-click on the green columns *Material*, *Plant*, or *MRP Area* to filter the results table by the material/plant/MRP area combination clicked.
- Double-click on the light blue column *MRP Element* or use the button *Filter by MRP Element* in the toolbar of the table to filter by an MRP element.
- Choose *Originator Number*to load the stock/requirements list of the material causing the requirement. The receipt element (for example, production order) that causes the requirement (for example, order reservation) is colored red in the newly loaded stock/requirements list of the originator.
- You can use additional, similar filter functions from the period totals and the information popups.

You can reset the filters by choosing the button *Reset Filters* in the top left of the application toolbar.

Requirement, receipt, and stock quantities can also be displayed in an alternative unit of measure. You can use the menu for the *Alternative Unit of Measure* pushbutton to select the required unit of measure.

Related Information

Excel Upload/Download
Data Processor

2.2.2 Period Totals

Use the corresponding buttons *Days*, *Weeks*, *Months*, and *Fiscal Year Variant* in the application toolbar to open the period totals. The period totals are displayed below the stock/requirements list. Currently, the modes *Days*, *Weeks*, *Months*, and *Fiscal Year Variant* are supported.

Double-click on the green columns *Material*, *Plant*, or *MRP Area* to filter the stock/requirements list and the period totals by the combination clicked. If you use this functionality in a different window (for example, the stock/requirements list or one of the information popups), the period totals are also filtered.

Double-click on the light blue columns *Planned Independent Requirements*, *Requirements*, or *Receipts* to filter the stock/requirements list by the corresponding type (planned independent requirement/requirement/receipt) and the date or period of the row clicked.

Choose the button *Reset Filters* in the top left of the application toolbar to reset the filtering in the period totals (and the stock/requirements list).

2.3 Application Toolbar

The application toolbar of the **Advanced MD04** provides the following functions, from left to right:

- *Update View*: Load the data according to your selection (new)
- *Load Variant*: Load a selection variant saved previously
- *Reset Filters*: Reset the filters for the stock/requirements list and the period totals
- *Days*/*Weeks*/*Months*/*Fiscal Year Variant*: Open the period totals in the relevant mode; clicking again hides the period totals again
- *AV/GR*: Switch between the availability date and the goods receipt date
- *Safety Time*: Switch the safety time on or off
- *Material Memo*: First, select a row in the stock/requirements list to edit the associated material memo
- *Send Mail*: First, select a row in the stock/requirements list to send a mail to the MRP controller for the corresponding material
- *Maintain Suggestions*: Jump to Customizing for the processing suggestions that can be prioritized for the exceptions
- *MRP elements (aggregated)*/*MRP elements broken down*/*Materials*/*Statistics*/*Demand-Driven Planning (DDP)*/*Theory of Constraints (TOC)*/*Material classification*/*Key figures*/*Material classification and batch information*/*Worklist*: Open the relevant information dialog box
- *Previous Material*: loads the stock/requirements list of the previous material in the worklist (for details on the worklist, see Information Popups [page 11])
- *Next Material*: loads the stock/requirements list of the next material in the worklist

2.4 Information Popups

The **advanced MD04** provides various popups that display additional important data about the MRP elements, material consumptions and material-specific key figures, for example. The popups can be used in parallel with the main screen and thereby enable the display of additional information, also serving as an entry aid and navigation aid for the stock/requirements list.

General Properties of the Popups

Use the **advanced MD04** popups in parallel with the main screen. While a popup is open, you can continue to work on the main screen, meaning in the stock/requirements list, for example. The popup remains available in the foreground. If you are using more than one monitor, you can use the main screen on one monitor and the popups on another. For each available mode, you can have a popup open at the same time.

The data of the main screen and of the popups is linked: Load the data for the stock/requirements list again in order to update all data for all popups. In the same way, all changes that you make in the stock/requirements list, for example, changing a value directly in the *Receipt/Demand* column, are visible in the popups directly.

Inversely, the popups provide various options to support you in navigating through the stock/requirements list:

- In a mode that contains the columns *Material*, *Plant*, and *MRP Area*, double-click on these columns to filter the stock/requirements list by the combination clicked.
- In the mode *MRP Elements Aggregated*, double-click in the light blue column *MRP Element* to filter the stock/requirements list by the MRP element clicked. Choose one of the columns marked with *Number of Exception Messages* to filter the stock/requirements list by the selected MRP element and the selected exception message.
- In the mode *MRP Elements Exploded*, double-click in the light blue column *MRP Element* to filter the stock/requirements list by the MRP element clicked and also by the material/plant/MRP area combination of the respective row. Choose one of the columns marked with *Number of Exception Messages* to filter the stock/requirements list by the selected material/plant/MRP area combination, and to color the selected MRP element with the selected exception message red in this filtered list.

It is possible to switch mode at any time in a popup. To do so, either choose the two arrow buttons *Previous Mode* and *Next Mode* in the popup toolbar to go forward or back, or choose the desired mode directly via the button *Switch Mode*. When switching mode, the popup retains its size and position.

The following explains the various modes in more detail.

MRP Elements Aggregated

An aggregation of the individual MRP elements across all selected material/plant/MRP area combinations is displayed here. The number of entries per MRP element, per MRP element with rescheduling date, and the number of exceptions, as well as the total of the value and receipt/demand are calculated.

If an MRP element appears with different currencies, there is one row per currency.

MRP Elements Exploded

Like *MRP Elements Aggregated*, only with additional explosion by material/plant/MRP area combination. Information on the value calculation (for example, the *Price per Unit of Measure*) is also displayed.

Materials

General material data and **plant data on the material** is displayed here.

Statistics

Information on the **stocks** is displayed here.

Demand-Driven Planning (DDP) / Theory of Constraints (TOC)

Calculates key figures and status values for materials. For more information, see the DDP and TOC sections.

Material Classification

Displays data from the tab page in the material master for the SCM consulting solutions. For details on the tab page mentioned, see the documentation for the comprehensive functions, under Enhanced Material Master View.

Key Figures

Read the material consumption values here. Under *Settings*, menu option *Key Figure Settings*, enter how many periods are to be displayed as of which date, or as of which period.

If you have performed reference analyses using the **MRP monitor** and use the **inventory controlling cockpit** (IOC), you can also see the key figures of the analysis here. To do so, enter the reference key and the number of periods to be displayed starting from which starting period.

Material Classification and Batch Information

Information from the classification system about the material class and, if you are working with batches, about batches is displayed here. Batches, including their stock and shelf life expiration dates, are listed individually. From the popup, you can block stocks or create a material reservation with reference to selected batches. Batches with reference to special stocks are not displayed.

Worklist

When you execute the advanced MD04 monitor, the worklist is initially filled with the selected materials. In dialog boxes that list material/plant/MRP area combinations, combinations can be selected and transferred to the worklist using the *Worklist* pushbutton. You can *add selected combinations to the worklist* or use the selected combinations to *replace the worklist*. You can use the *Previous Material* and *Next Material* pushbuttons in the Application Toolbar [page 10] to scroll through the materials from the *worklist*.

> **Note**
>
> It is possible the display the popup contents in inplace mode at the bottom part of the output screen. This is strongly recommended, when using the adv.MD04 in FIORI. In SAP GUI it is optional. Whether you display the popup contents in popups or in inplace mode, you specify in the user settings, see also User Settings / Customizing [page 21].

Related Information

Enhanced Material Master View

2.4.1 Demand-Driven Planning (DDP)

Calculates the **Status** of the material depending on the following thresholds:

- **Top of Red Safety** (corresponds to the minimum safety stock from the material master; the material master can be used to control whether the standard minimum safety stock or the minimum safety stock from SCM CS is used)
- **Top of Red** (corresponds to the safety stock from the material master; the material master can be used to control whether the standard safety stock or the safety stock from SCM CS is used)
- **Top of Yellow** (corresponds to the reorder point from the material master; the material master can be used to control whether the standard reorder point or the reorder point from SCM CS is used)
- **Top of Green** (corresponds to the maximum stock level from the material master; the material master can be used to control whether the standard maximum stock level or the maximum stock level from SCM CS is used)

The cell is colored according to the status.

If the **available quantity** is above the limit of **Top of Red Safety**, it is colored red (**Over Top of Red Safety**).

If the **available quantity** is above the limit of **Top of Red**, it is colored yellow (**Over Top of Red**).

If the **available quantity** is above the limit of **Top of Yellow**, it is colored green (**Over Top of Yellow**).

If the **available quantity** is above the limit of **Top of Green**, it is colored blue (**Over Top of Green**).

The columns **TOR DD Rep. Prio. [%]**, **TOY DD Rep. Prio. [%]**, and **TOG DD Rep. Prio. [%]** state the ratio of the respective limit (for example, **Top of Red**) to the **available quantity** as a percentage.

In addition, the net flow position key figure is calculated.

Net flow position = available stock + open supply - open past (including today's) demand - qualified spike demand

The cell is colored according to the status. If the net flow position is above the limit **Top of Green**, it is colored blue (**Over Top of Green**).

If the net flow position is between TOG and TOY, it is colored green.

If the net flow position is between TOY and TOR, it is colored yellow.

If the net flow position is between TOR and TORS, it is colored yellow.

The columns **TOR in % (net flow position)**, **TOY % (net flow position)**, and **TOG in % (net flow position)** specify the ratio of the respective limit (for example, **Top of Red**) to the **net flow position** as a percentage.

DDP executes a spike demand check for each material.

The spike demand check on the main screen of MD04 checks for each demand for which a material is produced:

- Whether it is in the spike horizon (spike horizon = current date + spike horizon (maintained in the material master))
- A spike demand check is performed for each material that is relevant (has a DPP-relevant MRP element. A distinction is made between whether the demand lies in the past, in the spike horizon (current day + 1 until current day + spike horizon), or in the future (beyond the spike horizon).

- The spike threshold for each material is calculated for the spike demand check. The spike threshold is calculated as a percentage of TOR (safety stock).
  The spike threshold defines whether or not a demand is a spike (if demand > threshold, then it is a spike).
  The % value for a material can be maintained based on the material/plant or material/MRP area in the material master on the SCM CS2 tab page.
- Demand in the past (yellow)
- Demand > threshold in the horizon = demand (red)
- Demand > threshold in the future = expected spike demand (yellow)

The Customizing table /SAPLOM/CMT_DISM is used to control whether an MRP element is DDP-relevant. Only MRP elements with the SCM CS CMT algorithm type DDP are relevant for DDP. The table can also be used to control whether demands on the same day are considered individually or cumulated during the determination of spikes.

The key figures and status values for DDP if the function was purchased appear in the main popup of the advanced MD04 and the DDP/TOC popup.

For more details about topics specific to DDP (Demand Driven Planning) or ToC (Theory of Constraints), see the documentation in the delivery platform (DLP).

2.4.2 Theory of Constraints (TOC)

Calculates key figures and thresholds on the basis of bottleneck materials and gating machines for materials that are maintained accordingly in Customizing (transaction /SAPLOM/CMT_CUST). If the function is licensed, the calculated values are output in addition to the DDP key figures in the demand-driven planning popup.

TOC calculates the various capacity utilizations for defined bottleneck materials and bottleneck machines.

- Own load (total load for all production orders of bottleneck materials on the bottleneck machine / in Customizing you can control which orders are used for the calculation depending on their status (planned, created)).
- External load (total load for production orders of non-bottleneck materials on the bottleneck machine / in Customizing you can control which orders are used for the calculation depending on their status (planned, created)).
- Additional load (total load for all planned orders (MTO PA, TOC PA, PA) of bottleneck materials on the bottleneck machine / in Customizing you can control which planned orders are used for the calculation depending on their status
- (planned, created).

Users can define up to four different additional loads (CED1 to ZB4). In Customizing, you specify from which PA the additional load is calculated. When executing advanced MD04, users can select on the Settings tab page the additional load that is used for the calculation of the key figures and thresholds. The other key figures are calculated and displayed, but are not included in the calculation of the additional load.

When calculating the loads, you have two options:

You take the time capacity that is maintained as a limit for work in process in SCM CS for the material.

On the Settings tab page, you can set the alternative shift logic indicator. In this case, the actual available capacities of the bottleneck machine determined from the routing that lie within the spike horizon are used as the time capacity.

For more details about topics specific to DDP (Demand Driven Planning) or ToC (Theory of Constraints), see the documentation in the delivery platform (DLP).

2.5 Alternative Calculation of Plant Stock

You can influence the costing and display of the plant stock as follows:

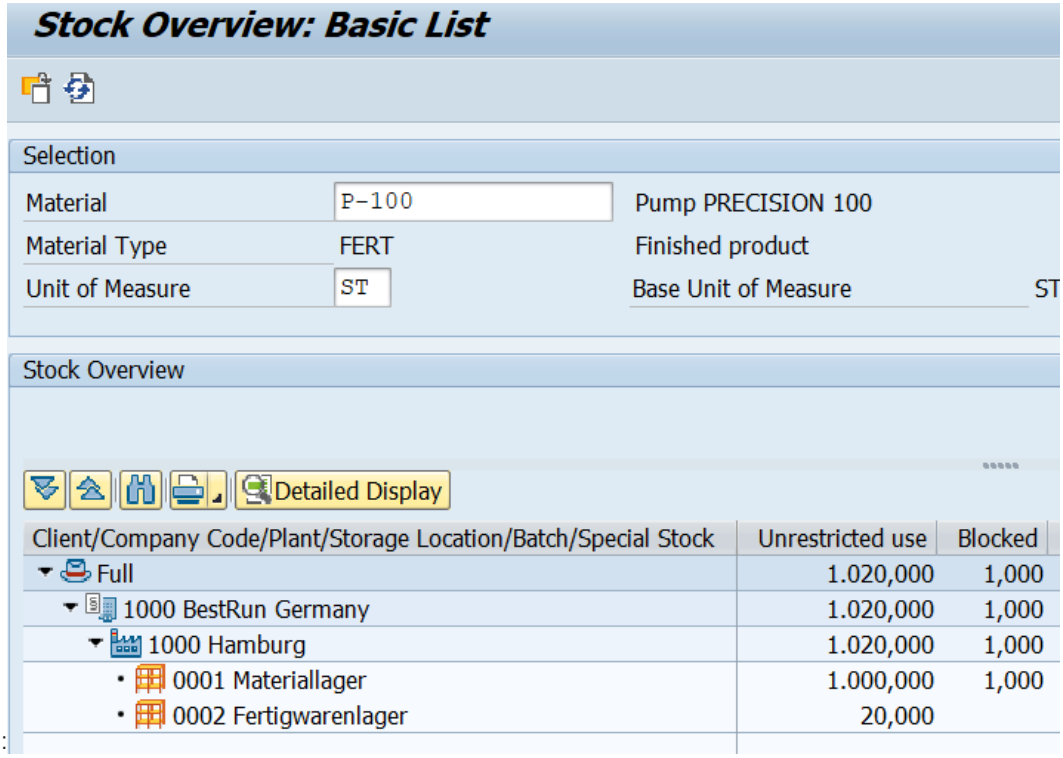
- In the plant stock, only take into account or exclude the stocks of selected storage locations.
- Exclude batch stocks with selected classification values from the plant stock and display them separately as a total or individually.

2.5.1 Storage Location Stocks

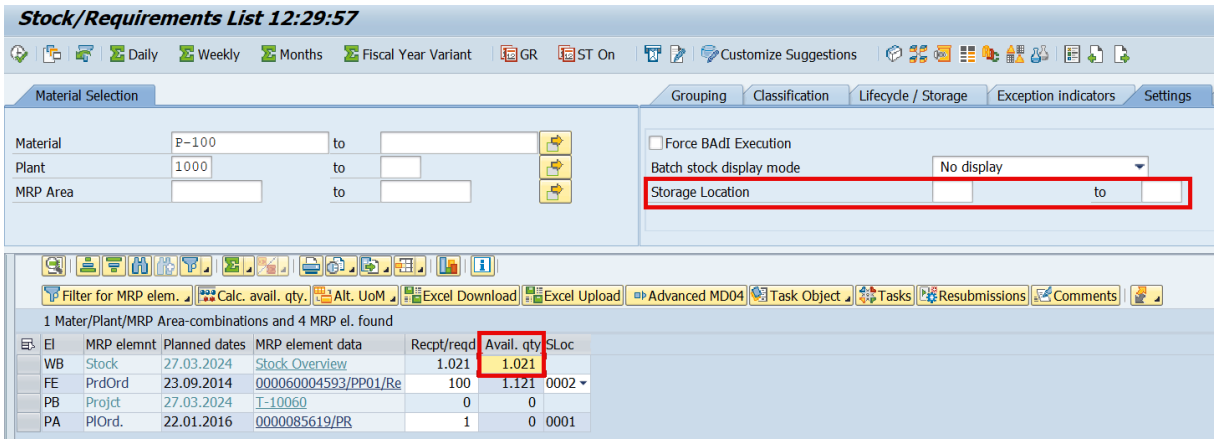
In the plant stock, you can only take into account or exclude the stocks of selected storage locations.

The following is an example.

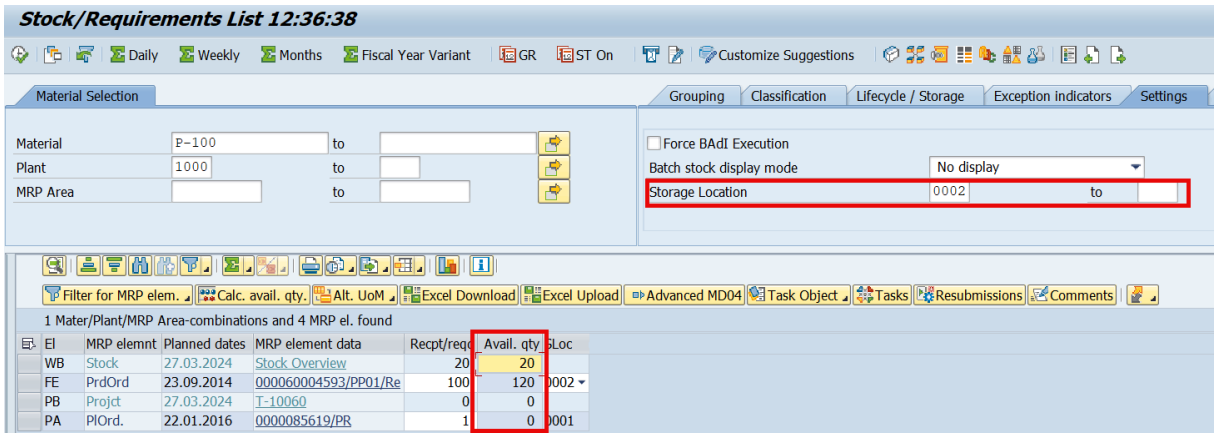
Initial situation:



The plant stock without restricting the storage location:



The plant stock with restriction of the storage location:



Only the stock of the selected storage location 0002 with 20 units is taken into account. The closing stock in the plant segment is reduced from 1,121 to 120 units since the stock for storage location 0001 with 1,001 units in total is not taken into account.

Related Information

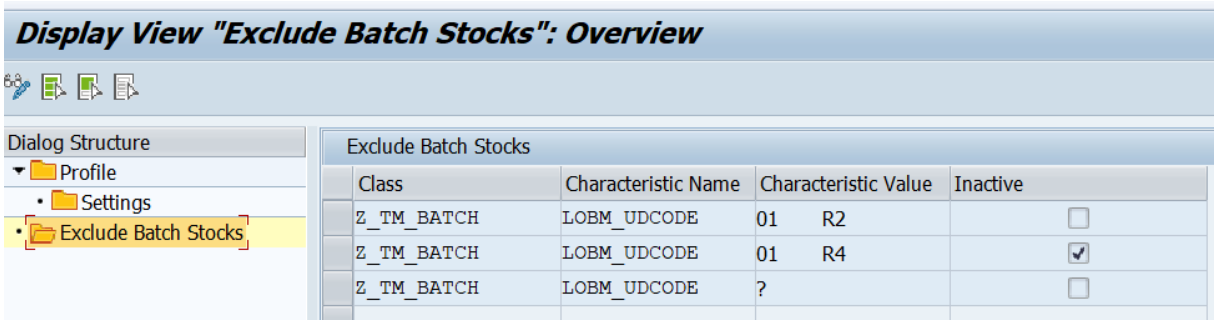
Data Preparation

2.5.2 Batch Stocks

You can exclude batch stocks with selected classification values from the plant stock and display them separately as a total or individually.

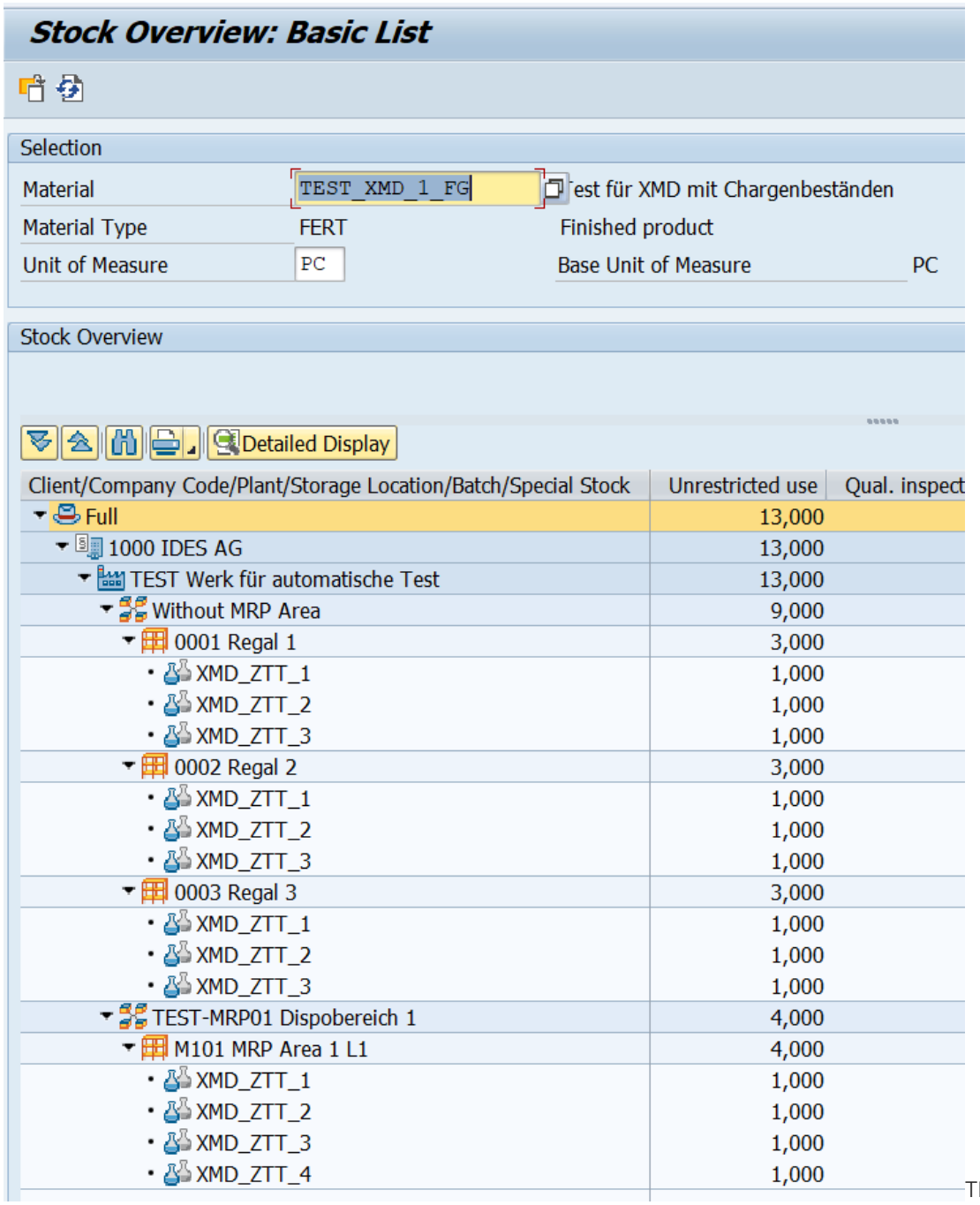
The following is an example.

The initial situation in transaction /N/SAPLOM/XMD_C_DISSET:



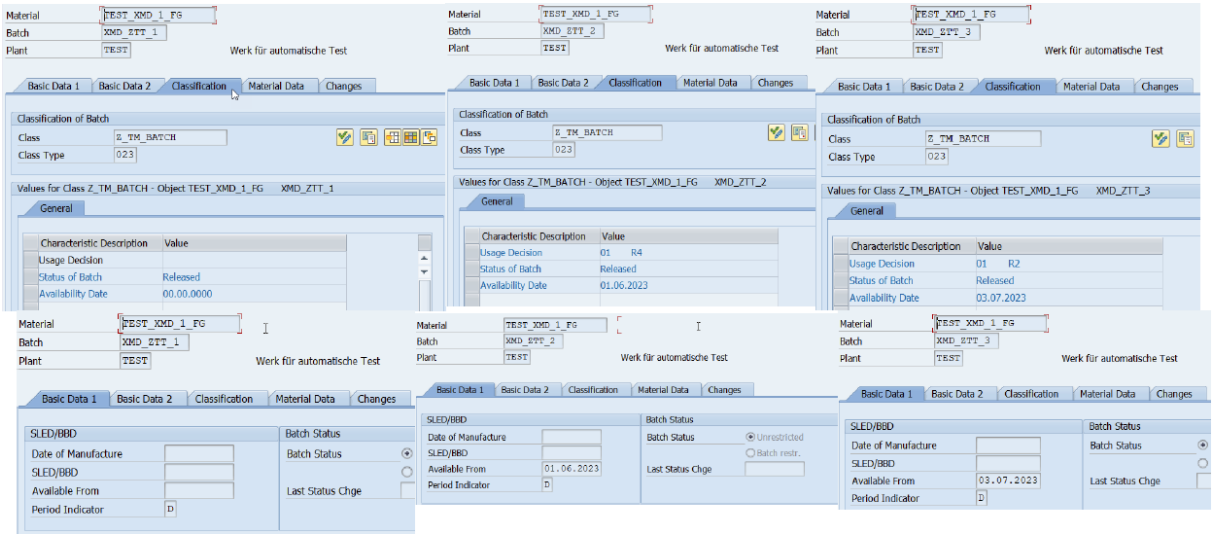
Batch stocks with the characteristic value 01 R2 are to be excluded from the plant stock, as well as batch stocks for which no characteristic values are maintained.

MMBE Overview:

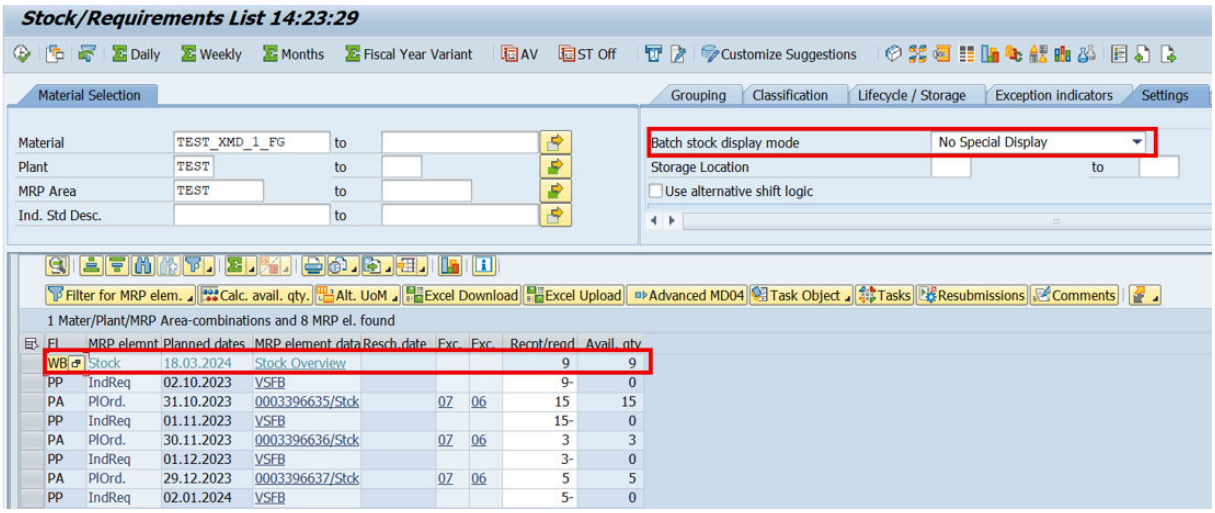


The plant stock without MRP area is 9 units. For each batch, there are 3 units of stock distributed to 3 storage locations.

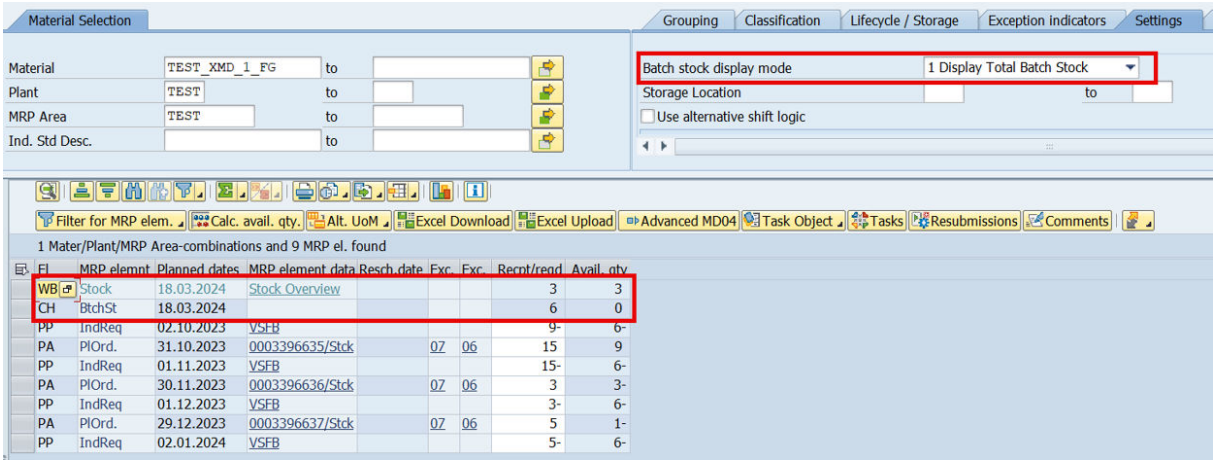
Classification and available as of the date of the batches:



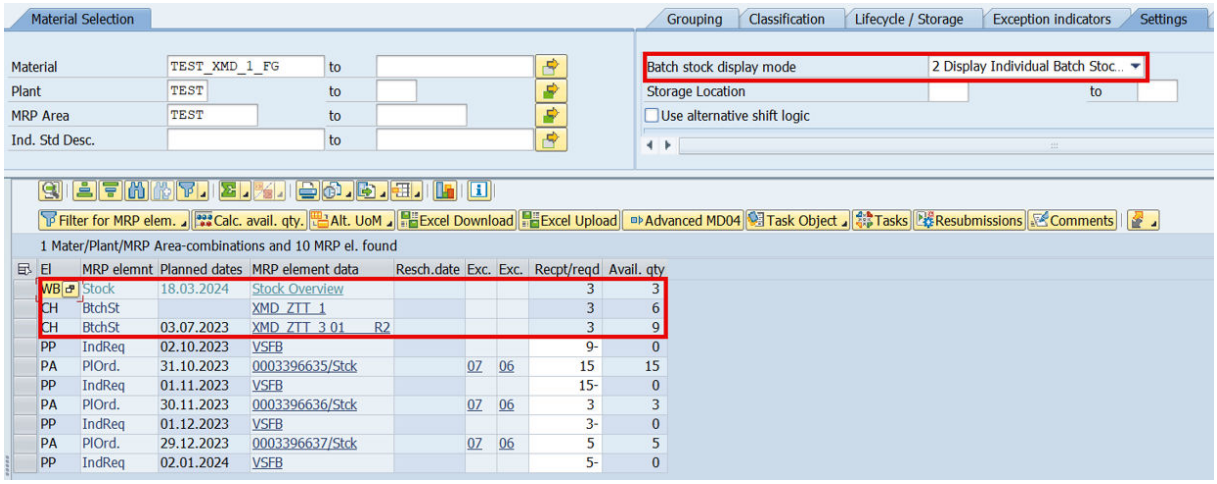
The default display of the plant stock including the batch stocks:



Exclude batch stocks that meet the criteria in transaction /N/SAPLOM/XMD_C_DISSET and assign them separately in total:



Exclude batch stocks that meet the criteria in transaction /N/SAPLOM/XMD_C_DISSET and flag them individually with their individual availability date:



Related Information

Data Preparation

Single-Use Standard BAdIs [page 24]

3 User Settings / Customizing

You can use the settings in the menu to set user and key figure settings.

User-Specific Program Settings

In this menu, set the configuration that is to be loaded when the transaction is called. Choose the following:

- Which *Period Total* is to be opened at the start
- Between availability date and goods receipt date
- Whether the *Safety Time* is taken into account
- The information popups that are opened at the start
- Whether the information popup content shall be displayed in inplace mode at the bottom screen (strongly recommended, when adv. MD04 is used in FIORI)
- As of which quantity of material/plant/MRP area combinations found a performance warning is to be displayed for your selection. The warning enables you to abort the load operation. It is important to note that a large quantity of material/plant/MRP area combinations does not **necessarily** automatically result in a long load time, if only a few MRP elements exist for each combination.
- Whether to always navigate to the corresponding display transaction of a document, when clicking on the document. By default the adv. MD04 first tries to navigate to the corresponding edit transaction of a document. If authorization is missing, the adv. MD04 navigates to the corresponding display transaction.

You can change all settings during the program flow, meaning that you can switch between availability date and goods receipt date again, for example.

Key Figure Settings

This is where you set which key figures you want to see in the *Key Figures* information dialog box. You can display material consumptions and/or data from your reference analysis in the MRP Monitor. For more information, see Information Popups [page 11].

You can use transaction `/n/SAPLOM/MD4_CUST` to maintain further settings. For detailed information, access the F1 help documentation for the respective Customizing activity.

Technical Settings

For a shorter program runtime, you can activate parallel processing on the results screen of the consulting solution **advanced MD04** on the *Settings* tab. Under Technical Settings, you maintain the required settings, such as the server group.

Rename Column Headers

You can rename the column headers of the stock/requirements list in **advanced MD04**.

GUI Filter Profiles

You can define profiles to hide screen elements.

Order Types for TOC **in** advanced MD04

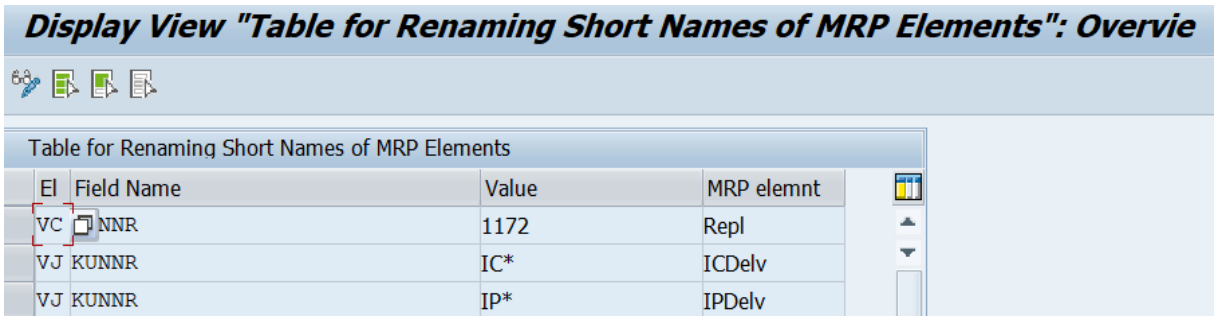
Here, you make settings for the **TOC** in the **advanced MD04**.

Related Information

Information Popups [page 11]
User Parameters

3.1 Renaming of MRP Elements

You can use the maintenance view /SAPLOM/MD4_DELB to rename MRP elements based on flexible conditions. In the example below, sales orders and deliveries are renamed if the customer number assigned to them meets the maintained conditions.



El	MRP elemnt	Planned dates	MRP element data	Resch.date	Exc.	Exc.	Recpt/reqd	Avail. qty	Customer	Customer name
WB	Stock	27.03.2024	Stock Overview				974	974		
WB	Stock	27.03.2024	Stock Overview				0	0		
VC	Order	08.11.2000	0000006542/000010/0001				13-	974	2130	COMPU Tech. AG
VC	Order	08.11.2000	0000006544/000010/0001				44-	974	1033	Karsson High Tech Markt
VJ	Deliv.	12.12.2003	0080013136/000020/0000				12-	974	1172	CBD Computer Based Design
VJ	Deliv.	12.12.2003	0080013138/000010/0000				39-	974	2200	HTG Komponente GmbH
BE	PchOrd	03.03.2004	4500015827/00020		20	07	12	986		
VC	Order	10.08.2004	0000010325/000010/0001				6-	986	2140	N.I.C. High Tech
VC	Order	11.08.2004	0000010323/000010/0001				6-	986	2007	Software Systeme GmbH
VC	Repl	09.09.2004	0000010425/000020/0001				15-	986	1172	CBD Computer Based Design
VC	Order	09.09.2004	0000010427/000030/0001				50-	986	2140	N.I.C. High Tech
VC	Repl	11.10.2004	0000010507/000040/0001				12-	986	1172	CBD Computer Based Design
VC	Order	11.10.2004	0000010509/000040/0001				42-	986	1033	Karsson High Tech Markt
VC	Order	10.11.2004	0000010597/000040/0001				44-	986	2140	N.I.C. High Tech
VC	Order	09.02.2005	0000010837/000030/0001				12-	986	2130	COMPU Tech. AG
VC	Order	09.02.2005	0000010839/000020/0001				43-	986	2004	SudaTech GmbH

Related Information

Single-Use Standard BAdIs [page 24]

3.2 Further setting options for data formatting

To find out about further setting options for data processing, such as for grouping documents or replacing phantom assemblies, see the documentation for MCF functions in the Data Preparation chapter. See the link below.

Related Information

Data Preparation

4 Business Add-Ins (BAdIs)

4.1 Advanced MD04-Specific BAdIs

The advanced MD04 monitor provides various BAdIs that you can program to enhance the selection screen and results tables on the output screen. You can use transaction `/SAPLOM/XCS_ENH` to view the enhancement options, including documentation.

4.2 Single-Use Standard BAdIs

To rename the short description and long text for an MRP element with reference to chapters Renaming of MRP Elements [page 22] and Batch Stocks [page 17], you must implement the single-use standard BAdI MD_DISPLAY_ELEMENT. Create an incident for component XX-PROJ-CON-MD4 to get further instructions.

5 S/4HANA Exclusive Functions

5.1 ePP/DS Integration

5.1.1 Overview

PP/DS extensions in the Advanced MD04 provide planners the instant access to additional data and functions available in PP/DS for advanced planning relevant materials i.e.:

- Dates and quantities from PP/DS at the main ALV grid
- Additional PP/DS fields and hotspots at the main ALV grid
- Additional PP/DS fields at the information popups
- New popups with PP/DS data
- Possibility to change the receipts in simulation mode without immediate saving to the database

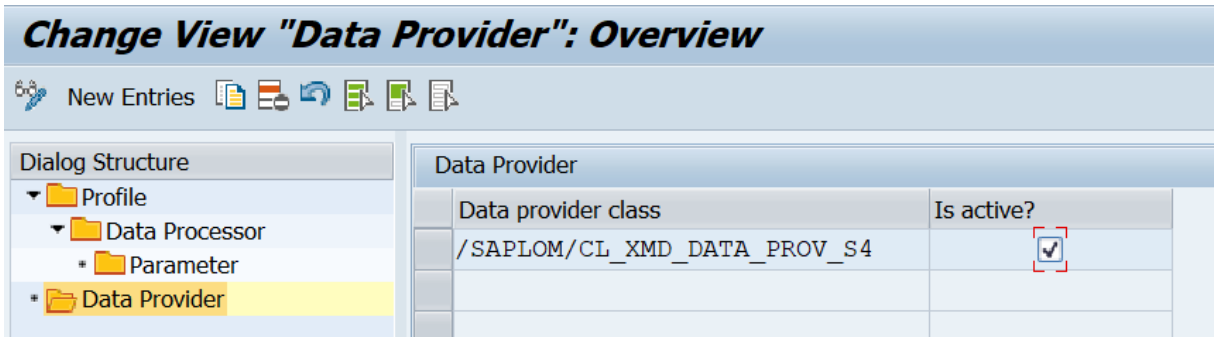
5.1.2 Prerequisites

The PP/DS extensions are only available, if you have an S4HANA system with a valid license to use ePP/DS. In customizing the switch Advanced Planning and Scheduling must be active. Transaction SPRO customizing path: *Advanced Planning -> Basic Settings -> Activate Advanced Planning and Scheduling*. PP/DS data and functions are only available for materials that utilize embedded PP/DS.

5.1.3 Configuration

To activate the PP/DS data extraction in the S/4HANA system the S/4 data provider SAPLOM/CL_XMD_DATA_PROV_S4 shall be maintained as the active one in the core customizing i.e. /SAPLOM/

XMD_MV04 view (accessible via transaction /N/SAPLOM/XMD_CUST).

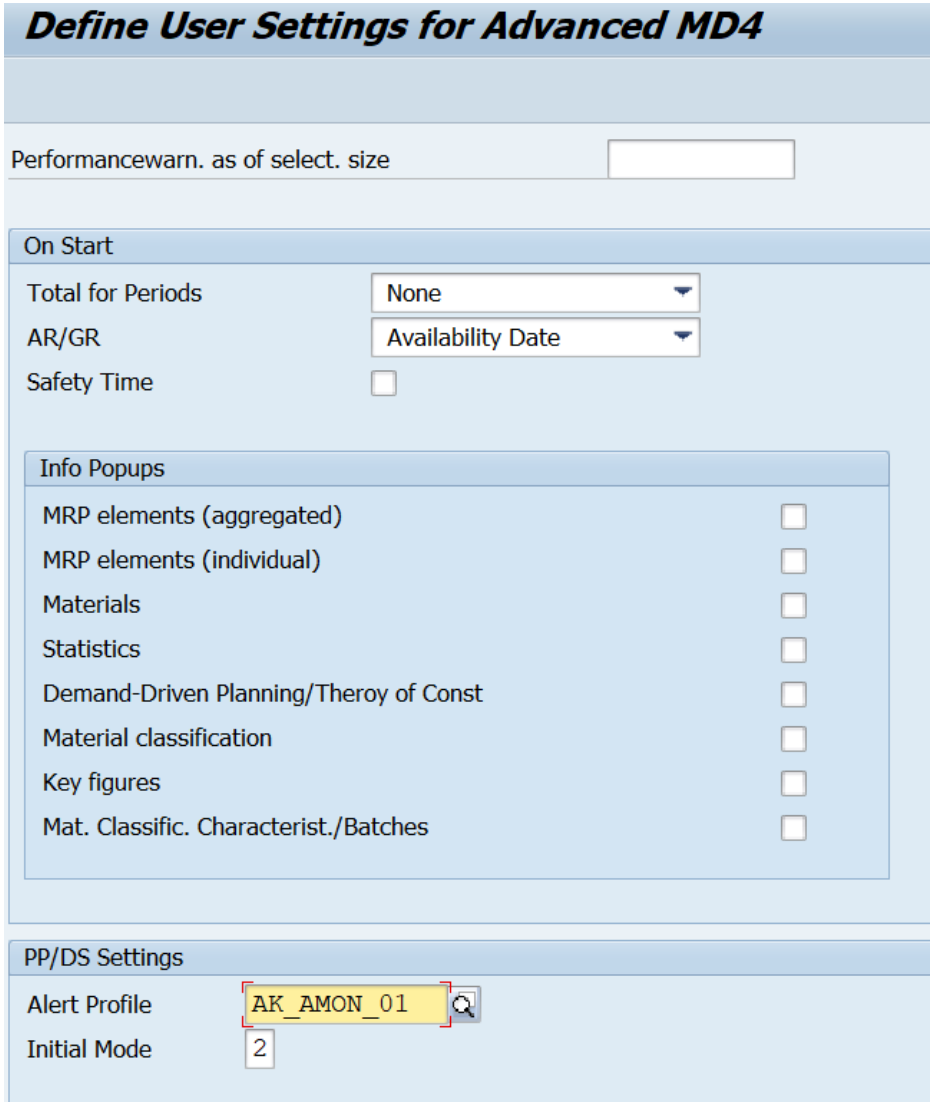


Advanced MD04 user specific settings are accessed either via transaction /SAPLOM/MD4_C or directly from the application menu bar (i.e. Settings -> Define User Settings for Advanced MD4). There is a separate box for PP/DS Settings. It contains the following input fields:

1. Alert Profile
2. Initial Mode

Alert profile is a standard object that specifies the alert categories and the priority of the alerts that are displayed in PP/DS applications.

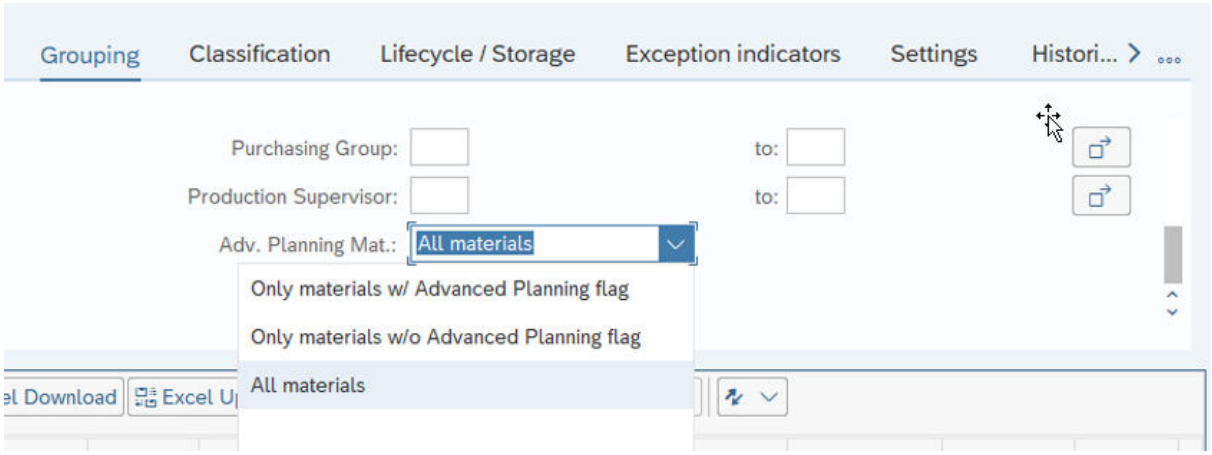
Initial Mode field defines in which mode (Interactive or Simulation) the advanced MD04 application would operate at the very beginning until the user switches it manually via the relevant ALV toolbar button. If nothing is entered, then interactive mode is set by default.



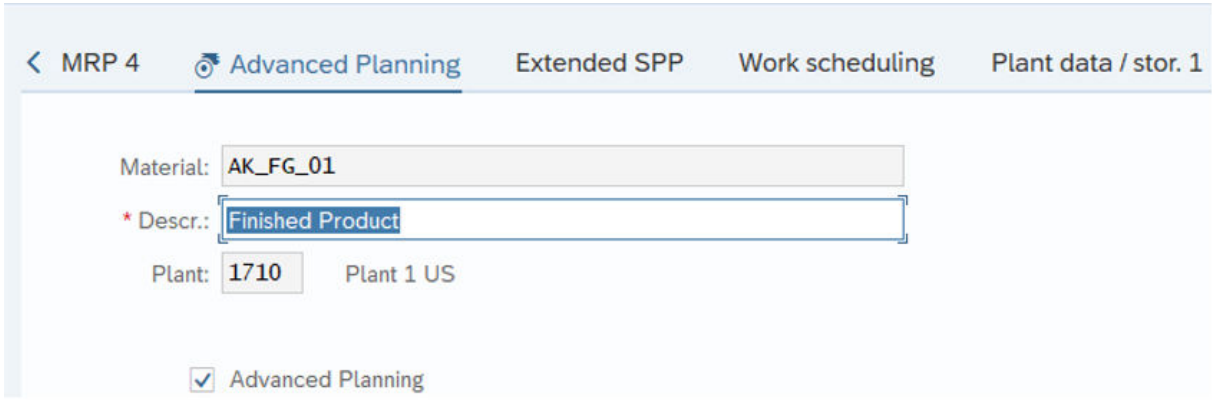
5.1.4 Selection Screen Extensions

Selection screen tab *Grouping* is extended with the drop-down list *Adv. Planning Mat.* (Advanced Planning Materials). There are three options for selection:

1. Only materials with Advanced Planning flag
2. Only materials without Advanced Planning flag
3. All materials



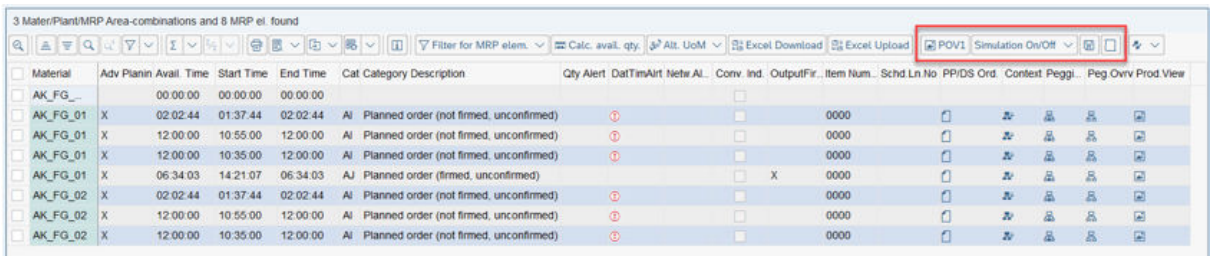
Advanced Planning is a standard flag in the product master that indicates relevancy for planning in PP/DS



By default, all materials are selected. In the main ALV grid the PP/DS relevancy of each selected product is displayed in the new column *Advanced Planning*.

5.1.5 Main Screen

The main output table is extended via an append structure with PP/DS fields and hotspots for calling the PP/DS popups or direct navigation to the PP/DS transactions.



Below is a full list of the new fields:

Field	Meaning
Indicator for Advanced Planning	PP/DS planning relevancy indicator from material master
Available Time	Availability time corresponding to the "Planning dates" field
Start Time	Start time corresponding to the "Start/release date" field
End Time	End time corresponding to the "Finish date" field
Category of Stock/Receipt/Requirement/Forecast	ATP Category
Category Description	ATP Category Description
Quantity Alert	Icon indicating the Quantity alerts same as in /SAPAPO/RRP3 transaction. Depending on the alert priority (Error/Warning/Info) the icon is displayed with the relevant pictogram. If no alerts the field is empty. Click on the icon triggers the standard PP/DS popup with the list of alerts and detailed info.
Date/Time Alert	Icon indicating the Date/Time alerts same as in /SAPAPO/RRP3 transaction. Depending on the alert priority (Error/Warning/Info) the icon is displayed with the relevant pictogram. If no alerts the field is empty. Click on the icon triggers the standard PP/DS popup with the list of alerts and detailed info.
Alert for Network	Icon indicating the Network alerts same as in /SAPAPO/RRP3 transaction. Depending on the alert priority (Error/Warning/Info) the icon is displayed with the relevant pictogram. If no alerts the field is empty. Click on the icon triggers the standard PP/DS popup with the list of alerts and detailed info.
Conversion Indicator for Orders	Checkbox that triggers conversion of planned orders and purchase requisitions. It is enabled only for receipt nodes and when the simulation mode is switched on. The conversion is triggered in PP/DS only after saving. In interactive mode the direct ECC conversion can be still done by means of clicking the icons >PR, >PO, >PP of the main structure.
Order Status Output Firmed (Receipt Quantities Firmed)	Order Status Output Firmed (Receipt Quantities Firmed)
Order Status Input Firmed (Bill of Materials Firmed)	Order Status Input Firmed (Bill of Materials Firmed)
Order Status Date Fixed	Order Status Date Fixed
Partially Delivered	Status Partially Delivered
Status 'Released'	Status 'Released'
Status 'Started'	Status 'Started'
Status 'Partial Confirmation'	Status 'Partial Confirmation'
Status 'Final Confirmation'	Status 'Final Confirmation'
Internal Number (UID) for an Order in APO	Order GUID
Item Number for Identification of an Input/Output Node	Position number
Schedule Line Number for Identification of an I/O Node	Schedule Line Number

Field	Meaning
PP/DS Order	Hotspot for navigation to PP/DS order
PP/DS Context	Hotspot for calling PP/DS Context screen
PP/DS Pegging	Hotspot for calling Single-Level Pegging popup screen
PP/DS Pegging Overview	Hotspot for calling Pegging Overview popup screen
PP/DS Product View	Hotspot for navigation to PP/DS Product View (tcode /SAPAPO/RRP3)

> **Note**
>
> All date and quantity fields are also populated with PP/DS values from LiveCache. The rest of the fields are taken from ECC DB tables.

Toolbar of the main ALV grid is extended with several new buttons:

1. POV1 button calls the PP/DS Product Overview popup for selected materials (tcode /SAPAPO/POV1)
2. Simulation On/Off menu button Enables/Disables Simulation Mode depending on the current mode
3. Save button saves the changes that has been made by the user in Simulation mode to the LiveCache
4. PP/DS Log button calls the PP/DS planning log that contains the planning and scheduling information for the recent changes.

5.1.6 Popup Extensions

The following Advanced MD04 popups were extended with PP/DS data:

1. Display Materials
2. MRP Elements (Individual)
3. MRP Elements (Aggregated)

Display Materials popup output table has been extended with PP/DS data the same way as MARC table in S/4HANA i.e. with standard include PRD_S_SCM_MARC by means of append structure. This is mainly the fields contained in 'Advanced Planning' tab of material master (tcode MM02) and some others.

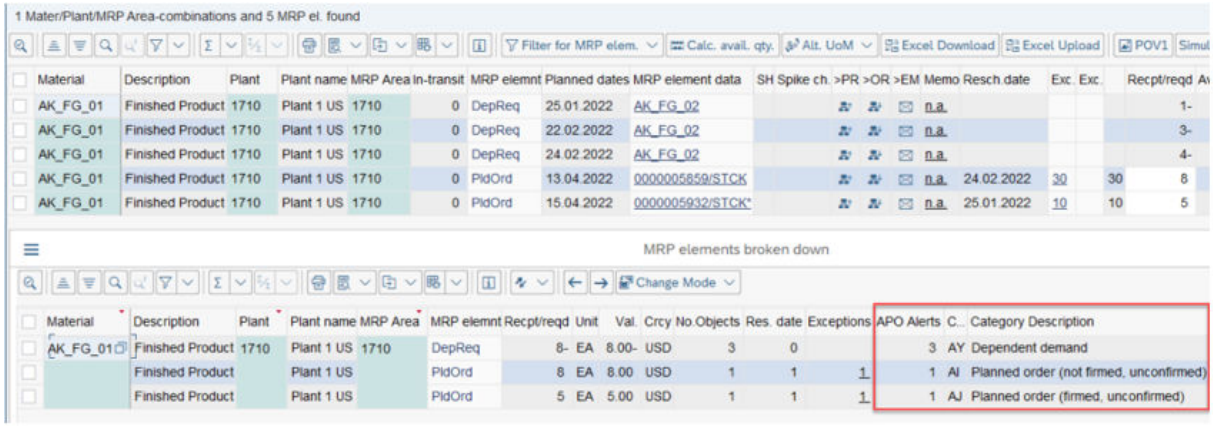
Component	Description
.INCLUDE	SCM Specific MARC Structure
SCM_MATLOCID_GUID16	Internal Key for Product
SCM_MATLOCID_GUID22	Internal Number (UID) for Location Product
SCM_GRPRT	Goods Receipt Processing Time
SCM_GIPRT	Goods Issue Processing Time
SCM_SCOST	Product-Dependent Storage Costs
SCM_RELDT	Replenishment Lead Time in Calendar Days
SCM_RRP_TYPE	PP Planning Procedure

Component	Description
SCM_HEUR_ID	PPC Heuristics
SCM_PACKAGE_ID	Planning Package to Which Product Belongs
SCM_SSPEN	Penalty Costs for Safety Stock Violation
SCM_GET_ALERTS	Alert Relevance of Product
SCM_RES_NET_NAME	Resource Network
SCM_CONHAP	Handling Capacity Consumption in Unit of Measure (Gds Rcpt)
SCM_HUNIT	Unit of Measure: Handling Capacity in Goods Receipt
SCM_CONHAP_OUT	Handling Capacity Consumption in Unit of Measure (Gds Issue)
SCM_HUNIT_OUT	Unit of Measure: Handling Capacity in Goods Issue
SCM_SHELF_LIFE_LOC	Use Location-Dependent Shelf Life of Product when Planning
SCM_SHELF_LIFE_DUR	Location-Dependent Shelf Life
SCM_MATURITY_DUR	Location-Dependent Maturation Time
SCM_SHLF_LFE_REQ_MIN	Minimum Shelf Life Required: Location-Dependent
SCM_SHLF_LFE_REQ_MAX	Maximum Shelf Life Required: Location-Dependent
SCM_LSUOM	Unit of Measure of Lot Size
SCM_REORD_DUR	Reorder Days' Supply (in Workdays)
SCM_TARGET_DUR	Target Days' Supply in Workdays
SCM_TSTRID	Planning Calendar for Periodic Lot Sizing Procedure
SCM_STRA1	Requirement Strategy
SCM_PEG_PAST_ALERT	Alert threshold for delayed receipts
SCM_PEG_FUTURE_ALERT	Alert threshold for early receipts
SCM_PEG_STRATEGY	Pegging strategy for dynamic pegging
SCM_PEG_WO_ALERT_FST	Avoid Alerts in Pegging
SCM_FIXPEG_PROD_SET	Retain Fixed Pegging for Product on Document Change
SCM_WHATBOM	Plan Explosion
SCM_RRP_SEL_GROUP	Planning Group
SCM_INTSRC_PROF	Profile for Interactive Sourcing
SCM_PRIO	Priority of Product
SCM_MIN_PASS_AMOUNT	Minimum Passing Amount for Continuous I/O Pegging
SCM_PROFID	Conversion Rule
SCM_GES_MNG_USE	Use/Consume Entire Quantity of a Receipt Element
SCM_GES_BST_USE	Use/Consume Entire Quantity of a Stock Element
SCM_THRUPUT_TIME	Throughput Time

Component	Description
SCM_TPOP	Third-Party Order Processing
SCM_SAFTY_V	Safety Stock for Virtual Child Location
SCM_PPSAFTYSTK	Safety Stock at Parent Location
SCM_PPSAFTYSTK_V	Safety Stock of Parent Location Virtual Child Location
SCM_REPSAFTY	Repair Safety Stock
SCM_REPSAFTY_V	Repair Safety Stock for Virtual Child Location
SCM_REORD_V	Reorder Point for Virtual Child Location
SCM_MAXSTOCK_V	Maximum Stock Level for Virtual Child Locations
SCM_SCOST_PRCNT	Cost Factor for Stockholding Costs
SCM_PROC_COST	Procurement Costs for Product
SCM_NDCOSTWE	Goods Receiving Costs (Network Design)
SCM_NDCOSTWA	Goods Issue Costs (Network Design)

MRP Elements Individual and Aggregated popup output table has been extended with the following PP/DS data:

1. ATP Category of the MRP element
2. ATP Category Description
3. Number of alerts per MRP Element/ATP Category combination at aggregated popup and Material/ Plant/MRP Element/ATP Category combination at individual

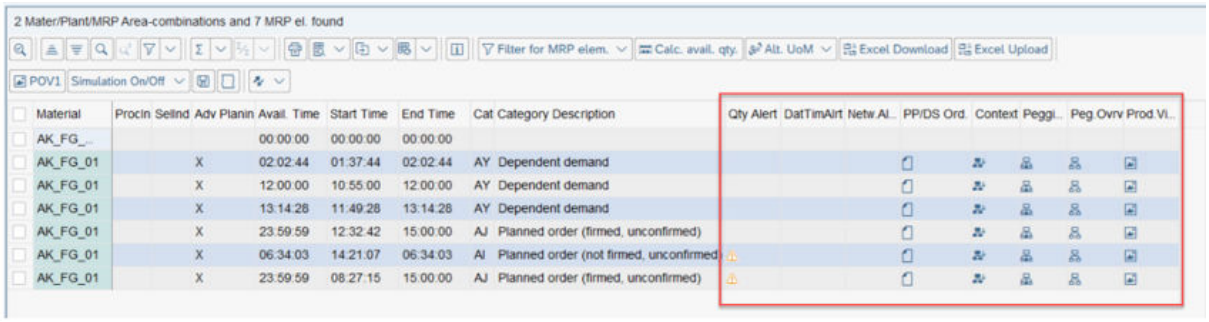


MRP elements (e.g. PldOrd) in PP/DS can have different ATP categories depending on customizing or status (released, confirmed, etc). So, if there is more than one ATP category for the same Material/Plant/MRP Element combination then PP/DS extension splits the scope for that MRP element and displays the information per Material/Plant/MRP Element/ATP Category combinations.

5.1.7 PP/DS Popups

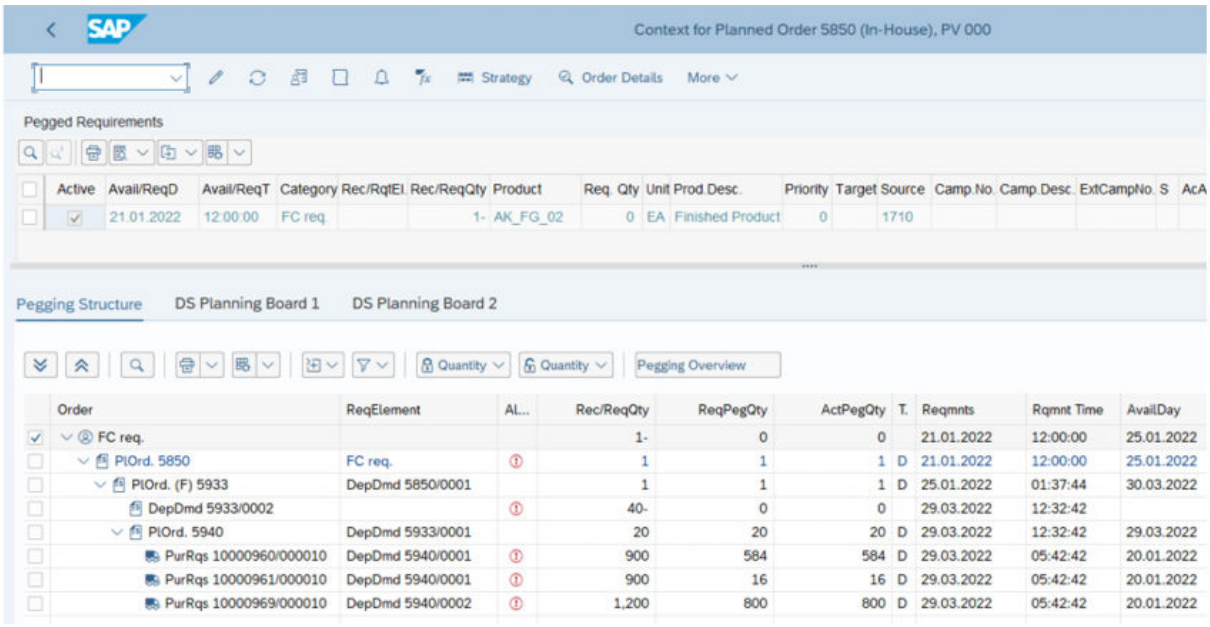
The following PP/DS related popups were added to Advanced MD04:

1. PP/DS Context
2. PP/DS Pegging
3. PP/DS Pegging Overview
4. PP/DS Alerts
5. PP/DS Product Overview (/SAPAPO/POV1)



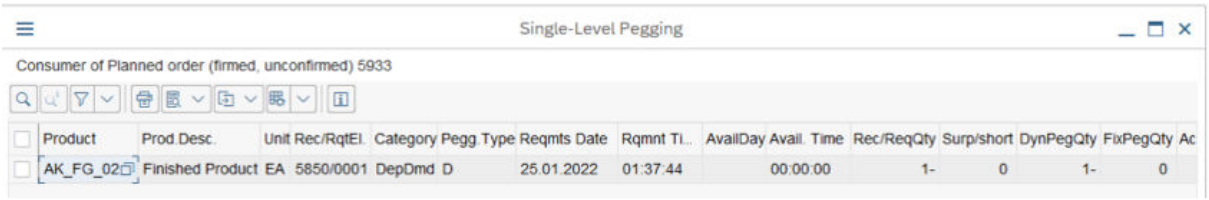
All these popups are either based on the relevant standard PP/DS screens or fully reuse the standard popups and called via hotspots within the main ALV grid except "PP/DS Product Overview" which is called on ALV toolbar button click.

PP/DS Context



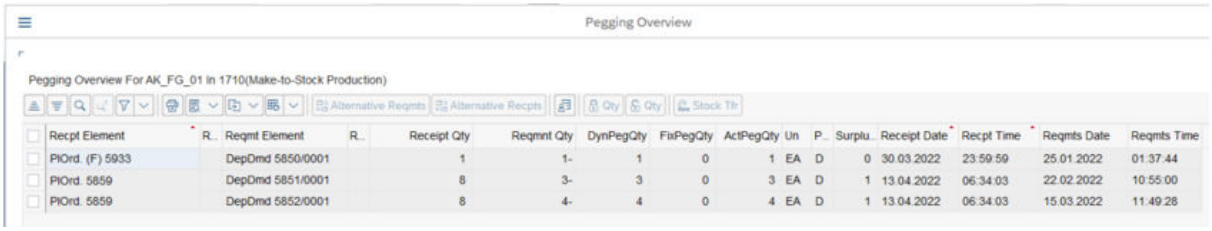
Context popup displays the list of upstream and downstream MRP elements related to the selected one.

PP/DS Pegging



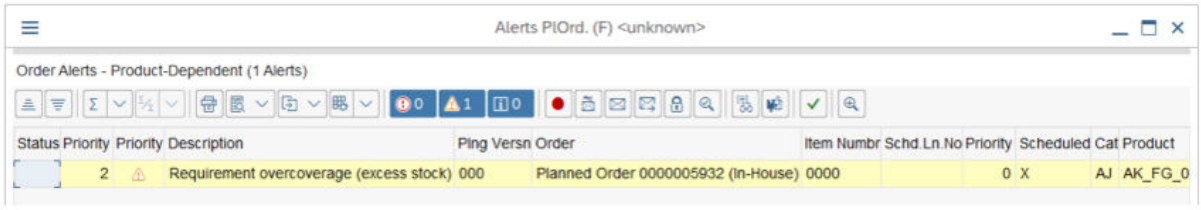
Pegging popup displays the single-level pegging lanes for selected MRP element.

PP/DS Pegging Overview



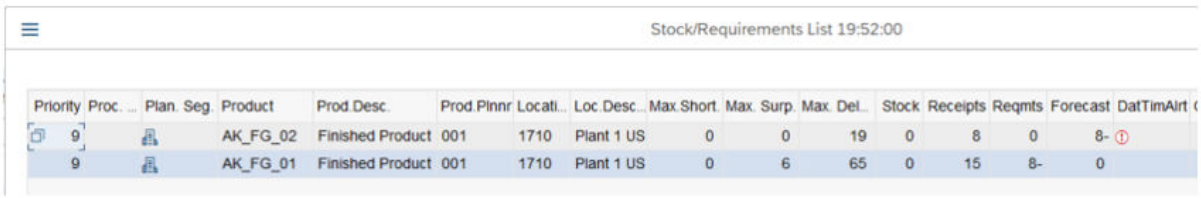
Pegging Overview popup displays the list of pegging lanes for the location product of selected MRP element

PP/DS Alerts



Alerts popup can be called via Quantity, Date or Network Alert hotspot. It shows the list of alerts for selected MRP element.

PP/DS Product Overview



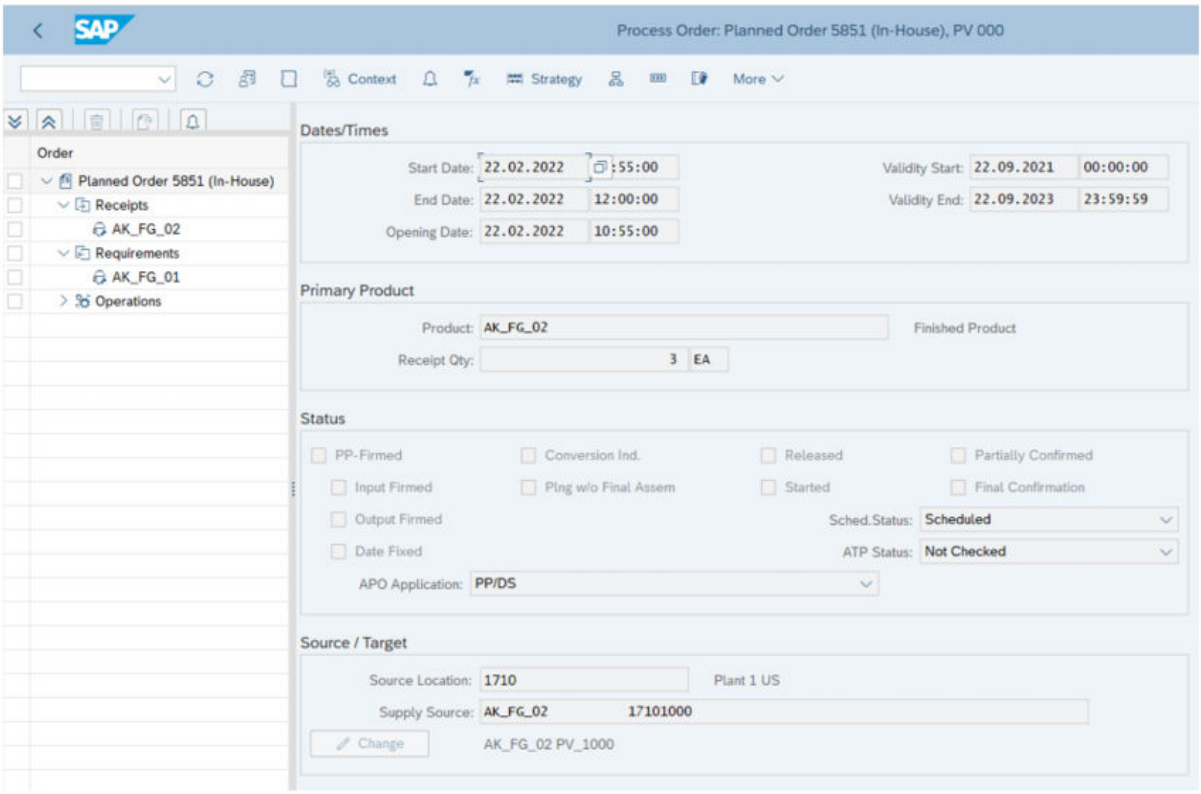
Product Overview popup displays the Stock/Requirement list aggregated per location product. Standard tcode /SAPAPO/POV1.

There is also a couple of hotspots that navigate to the relevant PP/DS applications in display mode:

1. PP/DS Order

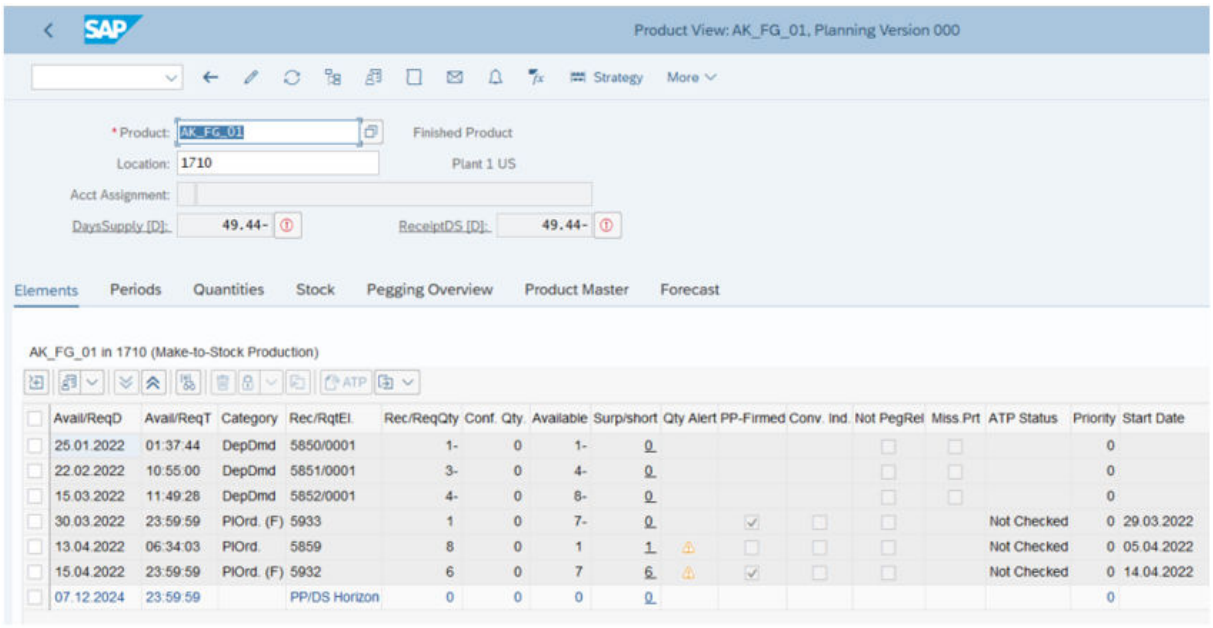
2. PP/DS Product View (/SAPAPO/RRP3)

PP/DS Order



Process order application shows the MRP element planning information: dates, quantity, statuses, source of supply, receipts, requirements, etc.

PP/DS Product View



Product View application displays the Receipt/Requirement list per location product of selected MRP element. Standard tcode /SAPAPO/RRP3.

5.1.8 Simulation Mode

Advanced MD04 application allows direct changes of the MRP elements (quantities, dates, conversion, etc) in the interactive mode i.e. the changes are automatically saved in the ECC DB tables immediately. PP/DS extension allows to keep the changes for entire scope in the PP/DS simulation session until the user press “Save PP/DS Simulation Result” on the ALV toolbar. Only then the data is saved into the LiveCache followed by the CIF transfer to ECC for DB tables update.

Initial mode (interactive or simulation) for the application start is defined via customizing. After the first selection the user can switch between the modes manually via the relevant button on the ALV toolbar.

> ⓘ Note
>
> Simulation mode can be switched-on only when the value “Only Materials w/ Advanced Planning flag” is set for the selection field “Adv. Planning Mat.“ Otherwise the interactive mode would be set automatically even if simulation mode is set as initial via customizing.

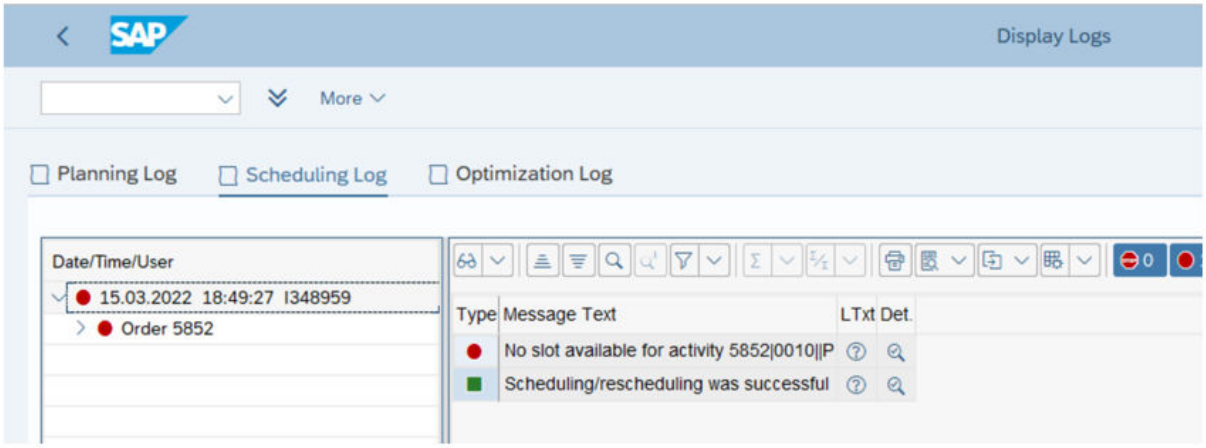
The list of the MRP elements enabled for changes is different in interactive and simulation modes as well as a list of changeable fields. This is because the simulation functionality operates with PP/DS data that is stored in the LiveCache. In PP/DS only planned/production orders and purchase requisitions/orders can be changed thus the same restriction is applied to the simulation mode in advanced MD04.

Below is a list of changeable fields in simulation mode:

1. Planned dates
2. Receipt/requirement quantity
3. Production Version
4. Availability Time
5. Conversion Indicator

Conversion indicator triggers the conversion of planned orders or purchase requisitions from PP/DS side. When the mode is switched to Simulation all ECC conversion hotspots (i.e. >PR,>PO,>PP) are removed and PP/DS conversion indicator is enabled for changing and vice versa.

Once the quantity, date or production version is changed in simulation mode the relevant PP/DS heuristic is executed. The detailed information about the planning and scheduling procedures can be checked in PP/DS log that can be shown on the toolbar button click.



5.2 Information Popup Demand-Driven Replenishment (DDMRP)

You can use the *Demand-Driven Replenishment* popup to evaluate S/4HANA Demand-Driven MRP (DDMRP) key figures.

6 MD4 Consulting Support

If you want to report errors for the **MD4** consulting solution, you can do so via the SAP ticket system.

1. First check that you have installed the current build / current transport of your **MD4** version in the system. New builds/transports for the respective **MD4** cycle appear at regular intervals. The last build/transport contains all previous error corrections. It is possible that an error that you want to report has already been resolved. It is then sufficient to download and import the latest build/transport of **MD4** from the delivery platform.
   You can find your currently imported **MD4** transport in the SCM Infocenter under transaction /n/SAPLOM/X_TRD.
   First compare the version in your system with the version that is available for download on the delivery platform.
2. Create an OSS incident under the component **XX-PROJ-CON-MD4**. For the **priority of tickets**, refer to the **SAP Note**.67739
3. Make sure that the **system connection** is open and that **credentials** for logging on to the system are provided in the **secure area** of the incident. Check that it is possible to log on to the **client** of your choice. Also check that the provided user name has authorization for the transactions **/n/SAPLOM/MD04, /n/SAPLOM/MD04_CUST, SE80, SE03**, and for **debugging** in the system.
4. Open the SCM Infocenter under transaction /n/SAPLOM/X_TRD and copy the output to the OSS incident.
5. Describe the issue: What is the system behavior and what would you have expected?
6. Provide a **step-by-step description** with an example of how to reproduce the error. An example includes:
   - **System name**
   - **Client**
   - **Variant**
   - **Plant**
   - **Material**
   - **Any other relevant entries on the selection screen**

   Describe the example in a document and attach it to the incident.
7. If an import error occurs, attach a screenshot of all imported SCM Consulting Solutions transports and the import sequence to the OSS incident, as well as a screenshot of the import error that occurred.
8. In the case of a short dump, attach it to the OSS incident (for example, from transaction ST22).

Create **an incident for each topic**. Please do not mix topics in the tickets. See SAP Note 50048.

> → Remember
>
> **MD4** consulting support only checks for errors in the source code of the solution. **MD4** consulting support does not provide support for the correct configuration of the solution. Therefore, MD4 consulting support does not check Customizing in the customer system.
>
> If you have questions about the setup of functions in the system, or require support with testing, contact MD4 Consulting.
>
> If you experience problems with the CORE setup, open an incident under the component XX-PROJ-CON-MCF.

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