Improvements of SAP ERP Applications for the Production Order Area (PP-SFC*) Delivered with ERP 2004 and ERP 2005

Applies to:
Area of production orders (PP-SFC*) of SAP ERP, release ERP 2004 [ECC 5.00] & ERP 2005 [ECC 6.00].

Summary
This article provides a quick overview about improvements and new development for the production order environment (SAP component PP-SFC*) extracted from the corresponding SAP release notes. The mentioned new functionalities will support you to optimize your business processes.

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Introduction

Have you been able to be informed about the functional enhancements concerning the production order area in SAP ERP? Most of us don’t find the time to read the comprehensive release notes of ERP 2004 and ERP 2005. Therefore this smart document was created. Please read it and have a look at the new functions and applications SAP provided to ease your daily work. Stay tuned!

PP-SFC Production Orders

Production Supervisor Role (New in ERP 2005 [ECC 6.00])

Use:

As of SAP ECC 6.00, PLM Extension (EA-APPL 600), the Production Supervisor role is available in the portal. The role with the work set Shop Floor Control includes the functions for the production supervisor’s daily tasks. The production supervisor can quickly and easily find the relevant information for all tasks, and carry out order and operation confirmations as well as create shift comments.

Work Overview:

The work overview provides you with a personal overview of the alerts issued as well as the work list. The work list includes orders and operations to be confirmed, for example. The system also displays the data from the SAP Netweaver Business Intelligence as well as personal contacts.

Shift Comments:

You can create and display comments containing information about shifts. You can also view the alerts issued. The system also displays the data from the SAP Netweaver Business Intelligence as well as personal contacts.

Confirmation:

The system displays the confirmations that were carried out. You can create confirmations for orders and operations. The system also displays any alerts that may have been issued.

Reports:

This work set provides you with a personal overview using a key figure monitor. You can also create reports (Report Launch pad). The system also displays the data from the SAP Netweaver Business Intelligence.

Service Map:

In this work set, the relevant application links are listed for the production supervisor.

Effects on Existing Data:

The production supervisor can use this role to access the relevant data. The data can originate from an SAP or non-SAP system.

Effects on System Administration:

The system administrator must make default settings for the key figures. The users can then make additional settings in the personalization.

Effects on Customizing:

You make the settings for the generic key figure monitor and the launch pad under Integration with other mySAP.com Components -> Business Packages / Functional Packages -> Production Supervisor.

Production Order BAdI and BAPI (ERP 2004 [ECC 5.00])

Use:

As of SAP ECC 5.00, you can use new Business Application Programming Interfaces (BAPI) and Business Add-Ins (BAdI) for production orders.

BAdI:

- Archive Additional Data (ARC_P_ORDER_WRITE)
For more information, see the Implementation Guide (IMG) under Production -> Shop Floor Control -> System Modifications -> Business Add-Ins.

**BAPI:**
- Create Order (Create1)
- Change Order (Change)
- Set Deletion Flag (SetDeletionFlag)
- Set Deletion Indicator (SetDeletionIndicator)
- Mass Processing of Orders
- Release (Release)
- Close (Close)
- Set User Status (SetUserStatus)
- Reset User Status (RevokeUserStatus)
- Carry Out Costing (Costing)
- Create Capacity Requirements (CreateCapacityRequirements)
- Check Material Availability (CheckMaterialAvailability)
- Complete Technically (CompleteTechnically)
- Schedule (Schedule)
- Carry Out WM Material Staging (WMMaterialStaging)
- Carry Out Existence Check (ExistCheck)

For more information on the method, see the BAPI Explorer (transaction BAPI) under Production Planning and Control -> Production Orders -> ProductionOrder.

### PP-SFC-CPL Order Closing (ERP 2004 [ECC 5.00])

**Use:**
The most frequently used archiving objects have been reworked so that they now correspond to a uniform standard. This has two main advantages: The archiving objects can be used uniformly in archiving projects, and accessing archived data across different applications has been improved.

The changes concern the following areas:

1. **Selection screen:**
   In the selection screen of the write program, you can specify under Processing Options whether the program should be performed in the test or production mode. If you select the Detail Log checkbox, a uniform log detailing which objects were processed is delivered in each write program.

   For certain archiving objects, such detail logs can also be delivered in other program, such as in the deletion or preparatory program. For more information, see the F1 Help documentation.

2. **Progress confirmation:**
   A progress message appears every 30 minutes in the job log for programs executed in the background. For program executed in dialog mode, the progress message appears in the status line every 10 seconds.

3. **Log:**
   With each archiving run, the following information is written to the log (spool list):
   - Number of table entries, processed archiving objects, archiving files, and so on.
   - Processed business objects (such as orders or billing documents)
As described above, you can choose in the selection screen of the write program whether a detail log listing the individual business objects processed is issued instead of the usual compact log.

4. Interrupting the archiving run:
To enable you to react appropriately to a given time frame or restricted disk place during archiving, the write phase of an archiving run can be interrupted and then continued at a later point. This function forms part of archive administration (transaction SARA).

5. Customizing specific to archiving objects:
The technical settings in Customizing specific to archiving objects have been examined for the processed archiving objects and modified where necessary. You can implement the new parameters by activating the corresponding BC Set (transaction SCPR20). The BC Set is called ARCH_<archiving object>. For example, the BC Set for archiving object SD_VBAK is ARCH_SD_VBAK. We recommend that you implement the new parameters.

6. Network graphic:
The network graphic for the individual archiving objects has been examined and any necessary adjustments have been made.

7. Enhanced access of the archive:
Archive access via the Archive Information System (AS) and the Document Relationship Browser (DRB) have been enhanced and improved. For some archiving objects, read access from certain application transactions to archived data is now available.

Overview of reworked archiving objects including special features

- CO_CCTR_PL was replaced by CO_TOTAL and CO_ITEM.
- CO_ITEM, CO_TOTAL
- CO_CCTR_EP was replaced by CO_ITEM.
- CO_CCTR_ID was replaced by CO_TOTAL and CO_ITEM.
- CO_COSTCTR was replaced by CO_CCMAST, CO_TOTAL and CO_ITEM.
- FI_DOCUMNT, FI_MONTHLY, FI_SL_DATA
- EC_PCA_ITM, EC_PCA_SUM
- MM_ACCTIT, MM_MATBEL, MM_MATNR, MM_EKKO, MM_SPSTOCK
- RV_LIKP
- SD_VBAK, SD_VBRK, SD_VTTK
- RL_TA, RL_TB
- PM_ORDER, PR_ORDER (process order) and PP_ORDER (production order)

The following is true for process and production orders:

With the exception of interrupting the archiving run, these archiving objects were not changed for SAP R/3 Enterprise 4.70. See SAP Note 713545.

- No progress confirmation messages are displayed
- Customizing specific to archiving objects was not changed.
- In general, no other steps are required for the upgrade. In particular, you do not have to create any new variants for write and deletion programs.

For more information on the changes implemented, see SAP note 577847.
Special features for upgrade from SAP R/3 Enterprise 4.70

The affected archiving objects were in fact already reworked for SAP R/3 Enterprise 4.70 (see SAP Note 577847). For the implemented changes to take effect, however, they had to be activated explicitly. If you have already activated them for Release 4.70, no further steps are required for this upgrade.

**Effects on System Administration:**

As new write and deletion programs have been assigned to the archiving objects, it is generally necessary to check the variants for scheduling the write and deletion programs and to make any necessary adjustments. In particular, it is necessary to enter the new variants for the deletion programs in Customizing specific to archiving objects. We recommend using the variants SAP&TEST and SAP&PROD. You can also use the BC Sets ARCH_<archiving object> to enter these variants. BC Sets are activated using the transaction SCPR20.

Note that these actions are not necessary for any archiving objects that have already been upgraded with SAP Note 577847.

**See also:**

For more information on the relevant archiving objects, see the SAP Library for SAP R/3 Enterprise Application Components under Scenarios in Applications -> Data Archiving.

**Standardized Order Report and Order Progress Report and Improved Usability (ERP 2005 [ECC 6.00])**

**Use:**

As of SAP ECC 6.00 (SAP_APPL 600) the order report for Material Requirements Planning (transaction MD4C) and the order progress report for Shop Floor Control (transaction CO46) have been standardized and usability has been improved.

**Shop Floor Control Order Progress Report (CO46)**

In this function you can either display the list-based order progress report or the multi-level order report. You can view order data either from a Shop Floor Control or MRP point of view:

- If you select the list-based order progress report, the system displays the order data in a hierarchical list.
- If you do not select the indicator, the system displays the order report.

**MRP Order Report (MD4C)**

The following functions are now available in the order report:

- **Edit Profile:** You can edit the profile for the order report on the initial screen. Previously, this was only possible in Customizing for MRP. You can make the following settings, among others, in the profile:
  - Display additional materials, for example, consumption-based planning materials, bulk materials, pipeline products, co-products and by-products.
  - Number of hierarchy levels that are read
  - Display additional material data, for example, stocks, standard price or production scheduler.
  - Display additional data for receipt elements, for example, planned total quantity, start date and end date, release date or system status.

- **Buffering of the order report:** If you have already called the order report and want to call the order report for another order from the requirements/stock situation, the system does not reread the data from the database. Instead it reads it from the buffer.

- **Multiple Selections:** You can execute the order report for multiple sales orders and items, and materials. If you call the order report from the Current Requirements/Stock List, the system uses the profile that you have defined in the user settings of the requirements/stock list for the order report. You can specify the profile that is to be used when the order report is called in the user settings, on the tab page General Settings. If you have not specified a profile, the system uses the SAP standard profile SAP000000001.
• You can use the Business Add-In MD_EXPORT_TREE to export and carry out further processing of the order tree. This BAdI belongs to the enhancement spot MD_ORDER_REPORT.

For more information about enhancement spots and enhancement implementations, see the SAP Library for SAP NetWeaver under Enhancement Framework.

**Effects on System Administration:**

You can use the following user parameters (SET/GET parameters):

• MTOLD Display Old Order Tree: Choose the list-based display for the order report
• PROFIDCO46 Profile for Order Report: The profile for displaying the order report that the system proposes when the order report is accessed from CO46
• PROFID Profile for Order Report: The profile for displaying the order report that the system proposes in MD4C

**Effects on Customizing:**

• Order Progress Report for Shop Floor Control (CO46)
  - You process the overall profile for the list-based order progress report in Customizing for Shop Floor Control under Information System -> Profiles for Order Progress Report -> Define Overall Profiles and Define Profiles for Displayed Fields.
• Order Report for Material Requirements Planning (MD4C)
  - You process the profile for the order report in Customizing for Material Requirements Planning under Evaluation or in Customizing for Shop Floor Control under Information System -> Define Profiles for Order Report.
  - The following standard profiles are delivered:
    - SAP000000001Standard profile MD4C
    - SAP000000002Standard profile CO46

**See also:**

For more information see the SAP Library under SAP ERP Central Component -> Logistics -> Production Planning and Control (PP) -> Material Requirements Planning (PP-MRP-PE) Evaluating the Planning Run (PP-MRP-PE) -> Order Report and under Production Orders (PP-SFC) -> Order Progress Report.

**Business Add-In for Document Links in the Production Order (ERP 2005 [ECC 6.00])**

**Use:**

As of SAP ECC 6.00 (SAP_APPL 600) you can use the Business Add-In (BAdI) Edit Document Links (WORKORDER_DOCLINKS) to control certain aspects of the automatic linking of documents to a production order. You can change or delete document links created by the system, and you can link new documents using a BAdI.

**Effects on Existing Data:**

The BAdI is an alternative to or enhancement of the following Customer Exits:

• PPCC00015 (Additional check for document links from BOMs)
• PPCC00016 (Additional check for document links from master data)
• PPCC00017 (Additional check for dialog processing of document links).

**Effects on Customizing:**

You can find the BAdI in Customizing for Shop Floor Control under System Modifications -> Business Add-Ins -> BAdI: Edit Document Links.

For more information see the documentation on the BAdI.
Printing with PDF-Based Forms (ERP 2005 [ECC 6.00])

Use:
As of SAP ECC 6.00 (SAP_APPL 600) you can print PDF-based forms.

You can output the following production order lists:

- Object lists
- Document references
- Kanban cards (only in conjunction with production orders)

If you use a PDF-based print program, you must also use a print program that supports the output of PDF.

You can use the following forms and print programs:

- Object list: PSFC_PRINT_LAY PSFC_OBJECT_LIST_PDF
- Document references: PSFC_DOC_LINKSPSFC_DOCLINK_LIST_PDF
- Kanban card: PSFC_KANBAN PPRKANB_PDF

Effects on Existing Data:
You can continue to use SAPscript output for the production order lists mentioned.

Effects on Customizing:
Print Customizing for Shop Floor Control has been enhanced (Shop Floor Control -> Operations-> Define Print Control).

Print Customizing for the following areas has also been affected by this change as it is, to a large extent, identical:

- Networks (Project System -> Structures -> Operative Structures -> Network -> Printing in Networks -> Define Print Controls for Shop Papers)
- Process Order (Process Order -> Operations -> Define Print Control)
- Quality Management (Quality Inspection -> Define Print Control, Forms, Print Programs)

You can output physical-sample labels with the PDF form QM_SAMPLE_LABEL1 and the print program RQPRPP10_PDF.

See also:
For more information, see the SAP Library under SAP NetWeaver -> Application Platform (SAPWeb Application Server) -> Business Services -> PDF-Based Forms (PDF-Based Form) and under SAP ERP Central Component -> Logistics -> Production Planning and Control (PP) -> Production Orders (PP-SFC) -> Printing Order Papers.

PP-SFC-IS Information System

Search Help for Manufacturing Orders (ERP 2005 [ECC 6.00])

Use:
As of SAP ECC 6.00 (SAP_APPL 600) you can use the revised search help Production Orders Using the Info System or Process Orders via Info System.

You can use this search help in order processing, in the archiving preprocessing program PPARCHP1, in the archiving program PPARCHA1, or in the confirmation for the production order.

After you have called the search help Production Orders Using the Info System or Process Orders via Info System the system displays the selection screen of the order information system. On the initial screen you can choose which type of list (for example, components) is used to display the search results.
You can now use multiple selections to search for and select multiple orders and to transfer them to the multiple selection results. Until now, it was not possible to make a multiple selection using this search help.

The default layout for the output list is used to display the search results. In contrast to the order information system, you cannot specify a layout for the list.

When the user calls the search help, the system carries out an authorization check for the order information system (transaction COOIS or COOISPI).

**Mass Processing of Planned and Production Orders (ERP 2004 [ECC 5.00])**

**Use:**

As of SAP ECC 5.00, you can also select planned orders and carry out a joint material availability check for planned and production orders in **mass processing** for **production orders** (transaction COHV) and in the Collective Availability Check (transaction COMAC).

You can also use a material availability check for **planned and process orders** in **mass processing** for **process orders** (transaction COHVPI).

**Improved Selection in Order Information System and Mass Maintenance (ERP 2004 [ECC 5.00])**

**Use:**

As of SAP ECC 5.00, you can use an improved selection function in the Order Information System and mass processing for both process and production orders. When you select orders, the system no longer determines all dependent objects (for example, the operations and components in an order) and outputs them in the list. Instead, only the dependent objects that match the selection criteria are determined. This reduces the amount of data that is selected and improves performance. You can also use the output list, for example, as a work list.

To use the improved selection, select the **Reduced Reading** indicator under **Options** in the initial screen of the Order Information System or mass processing.

**See also:**

For more information on the Order Information System and mass processing, see the Release Note **Order Information System and Mass Processing for Process Orders**.

**Improvements in the Order Information System and Mass Processing (ERP 2005 [ECC 6.00])**

**Use:**

As of SAP ECC 6.0 (SAP_APPL 600) you can use the following functions in the order information system:

- **Comprehensive Authorization Check on Transaction-Level (New)**
  As of SAP ECC 6.0, the system carries out an authorization check for the transaction that is stored in the selection screen variant when the user selects a selection screen variant of another transaction in: Mass processing, the order information system, background printing or productions orders, release of production orders, collective availability check, and so on.

  You can use the report PPIO_ENTRY_VARIANT_DISPLAY for an overview of the transactions in which selection screen variants have been entered.

  For authorized users, you can define in Customizing that the user receives an information message if he or she selects a selection screen variant of another transaction. You can define the type of this message COIS 016 in Customizing for **Shop Floor Control** under **Define System Message Attributes**.

- **Search Help for Production Orders (Enhanced)**
  For more information, see the Release Note **Search Help for Manufacturing Orders**.

- **Output List of the Order Information System and Mass Processing Standardized with Standard ALV Functions (Enhanced)**
  The new display of the lists differs from the previous display in the following ways:
The individual object lists and the object overview have been adjusted to improve performance and decrease the amount of memory used, especially when the lists are large.

In addition, the application toolbar has been revised and made clearer. You can now display or hide standard list functions using a pushbutton.

In the individual object lists, you can find the Environment Menu in the application toolbar.

You can use this to access the operation or component overview, the status, logs, or the Current Stock/Requirements List.

In the order header list, the system displays an icon for the order in a separate column Icon. This replaces the different colors used to indicate what sort of order was being displayed in the order header list (for example, production or process orders, or planned orders.)

In the output list of mass processing you can find the Mass Processing Menu in the application toolbar. You can use this menu to carry out the selection function in mass processing, to display and change the selected settings, and to call the log of the last mass processing.

As a result of the switch to standard ALV, the individual object lists no longer support profiles; instead, layouts are used. The user can create and change the layout directly in the function meaning that no Customizing settings are necessary. It may be necessary to create new layouts that are identical to the profiles that were previously used.

The system uses the following logic to determine which layout should be used:

- If no layout has been stored in the selection screen variant, the system automatically uses the default layout.
- If no default layout is available, the standard layout is used. As a default, the "old" display with profiles is no longer used.
- If the user selects selection screen variants that contain profiles, the system automatically uses the default or standard layout.

If you still want to use profiles, you must activate the old ALV display in the corresponding selection screen variant of the report PPIO_ENTRY. You can use the report PPIO_ENTRY_VARIANT_DISPLAY for an overview of the existing selection screen variants and to display which variant the "old" display uses.

You can use the Business Add-In WORKORDER_INFOSYSTEM to influence the layout-based object overview and the new individual object lists.

- Selection at Component-Level Also Possible Using Requirements Date and Missing Parts Indicator (Enhanced)

At component-level, you can now also make selections using the requirements date and the missing parts indicator. This integrates the missing parts system (transaction CO24) into the order information system.

- Reduced Reading for Planned Orders (New)

Reduced reading is now also supported for planned orders. Reduced reading takes only dependent objects that match the specified selection criteria into account. For more information, see the documentation on the data element Reduced Reading.

- Missing Parts Information System and Picking List Integrated in the Order Information System and Mass Processing (New)

The missing parts information system (transaction CO24), the picking list (CO27), and the picking list PI (COIK) are now integrated into the order information system and mass processing by means of selection screen variants and layouts. For these functions, the following selection screen variants with new standard layouts for the component list are available:

- SAP&MPART Missing parts list (CO24)
  - Layout 000000000003 Missing parts lists - Material view
Introduction

In the selection screen Mass Processing - Picking, you can define that only components that can be picked are selected.

- **Display of all Individual Object Lists in Mass Processing (Enhanced)**
  
  As in the order information system, you can now select all individual lists as well as the object overview in mass processing. In other words, you can also choose individual lists that do not support mass processing. For these lists, the Mass Processing tab page is not displayed.

  If you select the Object Overview, the system displays the Object Selection tab page, in addition to the Selection and Mass Processing tab pages.

  In the output of the object overview, you can then only carry out mass processing for the individual list Order Headers.

- **Log in Mass Processing in the Dialog (New)**
  
  Until now, a log was only issued automatically for batch jobs. You can now also automatically issue a log for mass processing in the dialog. If you make this setting on the Mass Processing tab page, the system automatically branches to the display of the log, once mass processing has finished.

- **Display Archived Process and Production Orders with Document Links and Purchase Requisitions (Enhanced)**
  
  When displaying archived data, you can now also display document links and purchase requisitions. To do this, use a layout-based overall profile.

- **Display All Individual Lists in Order Processing (Enhanced)**
  
  When you access the object overview from order processing (transactions CO01, CO02 or CO03), it is now possible to select all individual lists. To do this, use a layout-based overall profile. You can also select individual lists that you cannot change in order processing, for example, confirmations.

**Effects on System Administration:**

**Technical Settings**

You can display and change selection screen variants in the variant maintenance of the report PPIO_ENTRY. You can display and change the following values in the technical settings:

- **Order category (production and process order)**
- **Transaction for which an authorization check is carried out**
- **Lists that can be selected (in other words, you can define the initial list, for example, components, operations and so on)**
- **Functions that can be selected (for example, close)**
- **Mass processing active**
- **Old ALV display, for example, you could create your own transaction in the customer namespace and limit the authorizations in the selection screen variant to costing in mass maintenance.**

**Overview of the Variants:**

You can use the report PPIO_ENTRY_VARIANT_DISPLAY to display an overview of variants and their technical settings. For example, you can view information about which output list, which overall profile, and which layout have been chosen as pre-settings. If no overall profile has been chosen, the system uses the...
overall profile from the user defaults, (SET/GET parameter IOC) or the last overall profile that was used. If no layout has been specified, the system automatically uses the default or standard layout.

**See also:**
For more information, see the *SAP Library* under *Production Orders (PP-SFC) under Order Information System -> Individual Object Lists -> Definition of Variants* and under *Mass Processing of Process and Production Orders.*

**Planned Order Conversion in Mass Processing (ERP 2005 [ECC 6.00])**

**Use:**
As of *SAP ECC 6.00 (SAP_APPL 600)* you can convert planned orders in mass processing.

You can define the following parameters for the conversion:

- Order category
- Order type
- Collective orders
- Read bill of materials

You can execute planned order conversion immediately, in the background or online, or you can generate a function pre selection.

If you execute the function online, you go to individual conversion for each order. Depending on the order category that has been defined, you carry out *Individual Conversion of Production Orders into Planned Orders* (transaction CO40) or *Individual Conversion of Planned Orders into Process Orders* (COR7). You can also carry out partial conversion in these transactions.

**Note:**
For technical reasons, the system cannot write a log of the planned order conversion to the database. Therefore, logs can only be displayed in the same process (mode) in which the conversion was carried out. If you have activated parallel processing you cannot display logs in the same mode.

For batch jobs, a log is only generated in the spool if you have not defined parallel processing.

**See also:**
For more information, see the *SAP Library* under *Production Orders (PP-SFC) -> Mass Processing of Process and Production Orders -> Mass Processing Functions and Setting Up Parallel Processing.*