Improvements of SAP ERP Applications for Process Industry (PP-PI*) Delivered with ERP 2004 and ERP 2005

Applies to:
Applications for the process industry (PP-PI*) 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 applications of the process industry area (SAP component PP-PI*) extracted from the corresponding SAP release notes. The mentioned new functionalities will support you to optimize your business processes.

Author: Dr. Uwe Dittes
Company: SAP AG
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Author Bio
Dr. Uwe Dittes made his PhD in Chemistry at the University of Heidelberg. After working several years in the chemical and pharmaceutical industry (development & production), he joined the development organisation of SAP in 2001. He has a strong expertise in SAP PP-PI (especially master recipe, production versions, electronic batch record [EBR], execution steps [XSteps]) and xMII content development.
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Introduction

Have you been able to be informed about the functional enhancements concerning applications of the process-industry (PP-PI*) 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-PI Production Planning for Process Industries

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).

PP-PI-POR Process Order

Order Information System and Mass Processing for Process Orders (ERP 2004 [ECC 5.00])

Use:
As of SAP ECC 5.00, you can use the process order information system (transaction COOISPI) and mass processing (COHVPI) for process orders.

You can access the new functions in the menu under Logistics -> Production - Process -> Process Order -> Tools -> Mass Processing and Process Order -> Reporting -> Order Information System.

The new functions
Replace the functions Individual Object Lists (COID) and Object Overview (COIO)
Correspond to the existing Production Order Information System (COOIS) and the Mass Processing for Production Orders (COHV)

Effects on Customizing:
In Customizing for Production Planning for Process Industries, choose Process Order -> Information System -> Define Profiles for Order Information System.

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

Use:
As of SAP ECC 6.0 (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).

**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.

Select the indicator Reduced Reading under Options in the initial screen of the Order Information System or mass processing to use the improved selection.

**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 selections 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 6 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
  Layout 000000000004 Missing parts lists - Order view
- SAP&PICK Picking list (CO27)
  Layout 000000000002
- SAP&PICKPI Picking list PI (COIK)
  Layout 000000000002

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

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.

**Process Order: BAdI and BAPI (ERP 2004 [ECC 5.00])**

**Use:**

As of SAP ECC 5.0, new Business Application Programming Interfaces (BAPI) and Business Add-Ins (BAdI) are available for process orders.

**BAdI:**

**Archive Additional Data (ARC_P_ORDER_WRITE)**

For more information, see the Implementation Guide (IMG) under Production -> Production Planning Process Industry -> Process Order -> System Modifications -> Business Add-Ins.
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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)
- Revoke User Status (RevokeUserStatus)
- Carry Out Costing (Costing)
- Create Capacity Requirements (CreateCapacityRequirements)
- Carry Out Material Availability Check (CheckMaterialAvailability)
- Complete Technically (CompleteTechnically)
- Schedule (Schedule)
- Carry Out WM Material Staging (WMMaterialStaging)
- Carry Out Existence Check (ExistCheck)

For more information on these methods, see the BAPI Explorer (transaction BAPI) under Production Planning and Control -> ProcessOrderPI.

Order Processing
- Create Activity Confirmations (CreateActConfMultiple)
- Create Order Confirmations (CreateAtHeaderLevelMultiple)
- Confirm Time Events (CreateTimeEventMultiple)
- Create Confirmation Time Tickets (CreateTimeTicketMultiple)
- Get Proposal Data for Confirmations (GetAtHeaderLevelProposal)
- Get Proposal Data for Time Events (GetTimeEventProposal)
- Get Proposal Data for Confirmation Time Tickets (GetTimeTicketProposal)
- Get Detail Data of a Confirmation (GetDetail)
- Create List of Confirmation Using Selection Criteria (GetList)
- Carry Out Existence Check for a Confirmation (ExistCheck)
- Cancel Confirmation (Cancel)

For more information on these methods, see the BAPI Explorer (transaction BAPI) under Productions Planning and Control -> Production Planning Process Industry -> ProcOrdConfirmation.

**PP-PI-POR-OPC Order Processing**

Single Screen Entry for Confirmation of Process Orders (ERP 2004 [ECC 5.00])

Use:
As of SAP ECC 5.00, you can confirm process orders by using the function Single Screen Entry Confirmation (transaction COR6N).

The new function can also be found in the menu under Logistics -> Production – Process -> Process Order -> Confirmation -> Enter for Phase -> Time Ticket.
The appearance of the function is based on that of the *Single Screen Entry Confirmation for Production Orders* (transaction CO11N), enabling you to use a uniform interface for entering both process and production orders. The new function enhances the current function *Single Process Order Confirmation* (transaction COR6), which is still available.

**Effects on Customizing:**


See also:

For more information on single screen entry for the confirmation of production orders, see the release note *Single Screen Entry of Confirmations (4.6A).*

### PP-PI-POR-OCL Order Closing

**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.
New XSL Style Sheet for Process Instruction Sheet (ERP 2004 [ECC 5.00])

Use:

As of SAP ECC 5.00 (EA-APPL 500), you can use a new XSL style sheet that is designed for use with a touch screen to display process instruction (PI) sheets.

By simply touching the screen, the user can select large symbols for functions such as print or change, scroll up or down, and expand and collapse screen areas, even if he or she is wearing gloves.

Effects on Existing Data:

You can insert the new XSL style sheet PMC_STY_PO_DEFAULTX_IE6.XSL via the characteristic PPPI_Layout.
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