Angles for SAP Release Notes

Version: *2020SP6*

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End user – Highlights

O2C: Process Changes Dashboard to provide actionable insight into critical changes in your sales order process.

The new O2C Process Changes Dashboard will provide immediate answers to questions like:

- How many quantity changes, raised or reduced, took place per month?
- How many date changes, scheduled in or scheduled out, took place per month?
- How many order line prices, up or down, took place per month?
- How many releases of billing blocks were in time?
- What was the percentage of on-time delivery block releases?
- To use this Dashboard, activate the module Sales Document Changes.

Note: The standard Dashboards will give you a jump start when creating your own customized Dashboards to stay in control of your own business processes. When creating your own customized Dashboards, make sure that you create your own copy of the standard business Dashboard. When you open a Dashboard, it will not, unlike Angle Templates, create an automatic copy (with the prefix 'Based on'). You must create it yourself.

Overwriting standard business Dashboards can be prevented at upgrade when the Dashboards are authorized as view-only. This authorization can be set by Magnitude Consultancy/Support, or by your system administrator.

F2R: Better Understand Changes made to Invoice Receipts

On which invoice has the amount been set? What was the reason that an invoice block was set or removed? Who made changes to an invoice receipt? These, and many more questions arise daily when managing your daily operations. All the information needed to answer these invoice document questions is stored in the change documents in SAP. To make this information easy to access and use, we have added a new change data object, including the related references, to our Angles for SAP model: *Invoice Receipt Changes* [Objectclass: *Invoice Receipt Changes*]

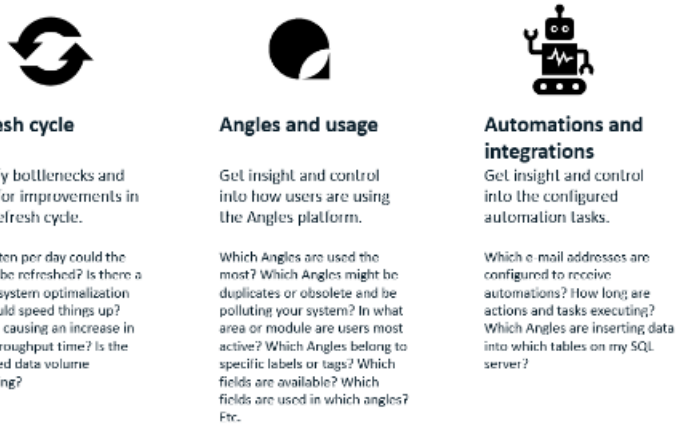
This object contains the most common tables and fields for this area. Since the amount of changed data can be substantial, you can customize the data that you need for your business processes. The different change objects can be activated or deactivated, including their underlying tables and fields. This way, you can limit the amount of data to be loaded, while answering all your SAP change-related data questions. This can be customized by your consultant at upgrade, by Angles for SAP functional support, or by your own Angles for SAP administrator.

Summary of the tables included in this billing document change object:

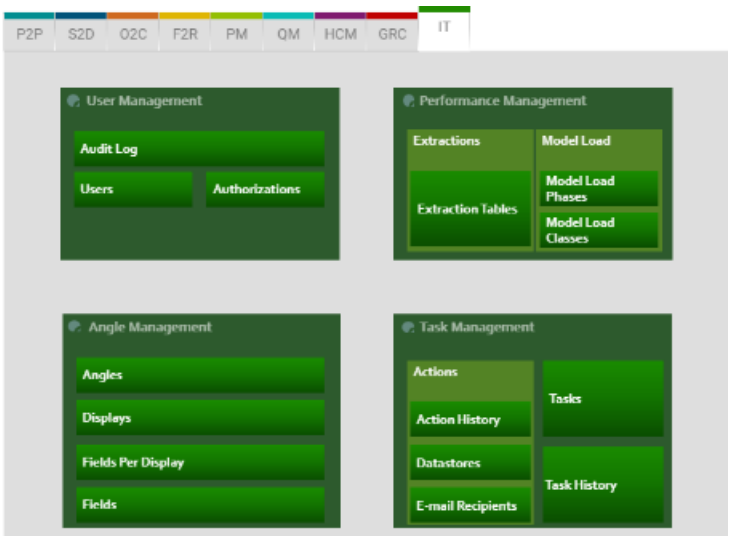
INCOMINGINVOICE	Tables	Description
Invoice Receipt Changes	RBCO	Account Assignment
	RBKP	Invoice Receipt
	RBMA	Incoming Invoice Material
	RBTX	Incoming Invoice Taxes
	RSEG	Incoming Invoice Document Item
	RBVS	Incoming Invoice Verification
	RBWS	Incoming Invoice Withholding Tax

System Insights/EA4IT: New System Insights

To improve your control of the Angles for SAP system and get the most out of your Angles for SAP investment, the EA4IT functionality has been improved and renamed to System Insights. With System Insights, you can get detailed insight into the following areas:



The Object and Activity diagrams have been extended with all new available objects and classes:



A set of new Template Angles/Displays and fields has been added to provide immediate insights and control in a matter of minutes.

End user - Fixes and improvements

QM: A4S Execution Status field added to the object Quality Inspection Result

The field Execution Status has been added to the object *Quality Inspection Result*. This field shows the execution status of Angles for SAP based on the SAP specification status information [QAMV-SATZSTATUS]. If you add this field to an Angle, you can manage and plan inspections based upon their execution status, like in other business processes.

A4S Execution Status	SAP Specification status information [QAMV-SATZSTATUS]
Open	0 - Can be processed
	1 - Must be processed
	A (Reqd char when control. Char accepted)
	B (Reqd char when control. Char rejected)
Closed	2 - Processed
	3 - Valuated
	5 - Processing is completed
	6 - Transfer charecteristics to subsystem
	7 - Fixed (cannot be processed)
	Linked Operation Execution status closed
	Linked QI lot Execution status closed
Cancelled	4 - Skip
Not Applicable	9 - Blocked for evaluations

P2P: New reference from Event with Serial Number to Purchase/Requisition Document

A new reference from the object *Event with Serial Number* to the objects *Purchase Document Header*, *Purchase Document Item*, and *Purchase Document Requisition* has been added to the Angles for SAP model. Starting from *Event with Serial Number*, you can now expose any related purchasing data. This will further enhance the possibilities to trace serial numbers through your process.

S2D: Introduction of Valuated Goods Receipt Blocked Stock scenario

In SAP, special movement types (107/109) are available to transfer financial ownership of goods before they are physically received. These are also known as *Goods receipt to valuated blocked stock*. This specific scenario has now been made available in the following objects:

- Purchase Document Schedule Line:
  - The new field Date of Valuated Goods Receipt Blocked Stock indicates the date that the goods are financially received.

- The existing field *Order Status Purchase* now contains the new value Valuated GR blocked stock. This schedule line is financially owned, but not yet received.
- When financially received, the received value will be added to the *Received Value* field, while the quantity will not (yet) be added to the Received Quantity.

- Stock:

  - The existing field *Stock Status* now contains the new value Valuated GR blocked. This stock line is financially owned, but not available.
  - The existing field *Stock Type* indicates Stock in transit.

These indications for the Valuated Goods Receipt Blocked Stock scenario are applicable to Normal, Sales Order, and Project Stock-related purchasing. With this, reporting opportunities arise around:

- Financial reporting of stock in transit, purchased via external vendors, where financial ownership is transferred before goods receipt.
- Lead time calculation between the start of financial ownership and the actual receipt of goods.

P2P: Better Understanding of Purchase Requisition Block changes

Which changes have been made to the Purchase Requisition Blocks? When was a block added? Was a block removed in time to prevent stock-outs? These and many more questions arise daily when managing your daily operations. All the information needed to answer these purchase requisition block questions is stored in the change documents in SAP. To make this information easy to access and use, we have added new fields to the object *Purchase Requisition Changes*:

- Blocking Indicator [EBAN/BLCKD], indicator if block is set
- Blocking Text Information [EABAN/BLCKT], free text a user on a block

These fields are part of the object *Purchase Requisition Changes* in the Angles for SAP module *Change Documents*. This object contains the most common tables and fields for this area.

Since the amount of changed data can be substantial, we have made it possible to customize the data you need for your business processes. The different change objects can be activated or deactivated, including their underlying tables and fields. This way, you can limit the amount of data to be loaded, while answering all your SAP change related data questions. This can be customized by your consultant at upgrade, by Angles for SAP functional support, or by your own Angles for SAP administrator.

O2C: New reference added from Customer Material Info Record to Material

A new reference from the object *Customer Material Info Record* to the object *Material* has been added to the Angles for SAP model.

Starting from the object *Customer Material Info Record*, you can now expose any information related to Material. This will also enable you to start your Customer Material Info Record data analysis on Material level. You can answer questions such as 'which customer material info records are available for a particular (group of) material(s)?'.

MDM: Available Storage Locations per Material/Plant

A new field, Storage Locations Material has been added to the object Material on Plant Level. This field will show you all the available storage locations per material plant. It can be used to manage your master data for different storage locations across plants.

Simplified date filtering options

Filtering on dates has been simplified by merging the relative options (e.g. relative after) into other filter types (e.g. after period). The following date and time filter options have been removed because they are now covered by other filter options:

- relative after
- relative before
- relative between
- relative not between

O2C: Use of Corrected/Rounding Quantity in MRP-relevant of sales orders lines

In SAP, a correction quantity (VBEP-CMENG) can be used, which overrules the ordered (VBEP-WMENG) and confirmed quantity (VBEP-BMENG). In most situations, the corrected quantity used is identical, but in specific situations, it can be different, and will impact the quantity in the Sales Document (SD) schedule line, for example, when using rounding profiles, (customer-) specific logic in order entry or manual changes in sales documents (such as removing or adding new schedule lines).

In the Angles for SAP logic, this corrected quantity (VBEP-CMENG) was not used. This has now been changed, impacting the creation of the SD schedule lines in two scenarios:

- Corrected Qty > Ordered/Confirmed Qty => result: an additional SD schedule line is created (Qty = Corrected Qty - Ordered/Confirmed Qty), relevant for supply/demand matching
- Corrected Qty <= Ordered/Confirmed Qty => result: split of SD schedule line into:
  - Schedule line 1: Open/Closed (for the Corrected Qty)
  - Schedule line 2: Cancelled (for Ordered/Confirmed Qty minus Corrected Qty)

Fixed issues

S2D: BOM Item: Reference to Document Item not correct

The reference from the object BOM Item to Document Item was incorrect, resulting in the following error message: **Itemclass "BOMItem" does not support Reference #222 (Document)**.

Likewise, Jumps via Document Item resulted in Angle warnings. The reference has been corrected.

O2C: Output Message: Reference to Delivery Header is empty

In the object Output Message, the reference field to Delivery Header was empty, although the related object key existed. This has now been fixed. All related Delivery Header numbers are now correctly shown. Note that a Delivery Header cell can still be empty if the related delivery (old data) is no longer loaded. The output message field is still available in Angles for SAP in that case, but the related delivery is no longer available/loaded.

System Insights/EA4IT: Template 'Automation Task Action Arguments' missing view

The Template *Automation Task Action Arguments* was missing a view resulting in an error when executing. The data from the object *Task Action Arguments* has been integrated into the object *Automation Task Actions* and the object *Task Action Arguments* has been discontinued. A new Template has been created on the object Automation Task.

O2C: Reference from Delivery Item to Ship To Address not always correct

The reference from the object *Delivery Note Line* to the object *Ship-to Address* did not always show the correct identification number of the address of the ship-to party. This has now been resolved.

O2C: Incorrect Stock Availability % when Quantity Open = 0

The field *Stock Availability %* in the object *SD Schedule Line* showed incorrect values when Quantity Open was 0 (with execution status closed or canceled). This has now been corrected.

- When the Quantity Open is 0, the Stock Availability % will now show a value of 100%.
- When the Quantity Open is <> 0, the Stock Availability % will show a value between 0% (cannot be delivered) and 100% (can be delivered completely).

Duplicate schedule lines in rare circumstances

In some edge case conditions, schedule line IDs could be duplicated. This has been fixed.

IT user - Usability improvements

System Insights / EA4IT: Jump to Angles and Displays via clickable fields

Analysis in the System Insights model often makes you want to act on a particular Angle or Display, e.g. Angles with a particular label, using specific fields, or containing warnings. With the new clickable fields feature, you can jump from a list of Angles and Displays directly to the Angle or Display that requires attention.

Introduced copy of Automation Tasks Actions in IT Management Console

In the IT Management Console, admin users could already copy an entire task. Admin users can now also copy a single action and add it to the original or another task.

Included modules not shown as active in Modeling Workbench

When a parent module is activated, the included modules implicitly become active as well. This was not visible in the Modeling Workbench. The Modeling Workbench now displays all included modules of an active module as active.

IT user - Fixes and improvements

System Insights: New fields added to the object Extraction Tables

To improve analysis and the extraction process, seven new fields have been added to the object Extraction Tables:

- Decompression time
- Compressed size
- Decompressed size
- Compression ratio
- Delete ZIP duration
- Schema builder duration
- Move files to delta folder duration

Angle Warnings Tool: Solve warnings on Angles used in automation tasks

Enable Angle Warnings Tool (AWT) to solve warnings on Angles that are used in automation tasks. In prior releases, these Angles would be blocked, and warnings had to be resolved manually. With this change, the user will be notified and prompted with the choice to proceed or not.

Fixed issues

Modelserver: DetectRecursiveCouplingUsage setting slows down Modelserver Load

When *DetectRecursiveCouplingUsage* is set to true, scanning properties for recursion are performed. Because this setting was read at a relatively late stage during the load, the general log would fill up with access violations, causing the Model load to slow down. This has now been fixed.

Angle / Display name is not displayed in IT Management Console when user is not authorized to execute the Angle

Previously, if you are assigned a system role that only allows you to schedule Angles and manage tasks, you could see some Angle and Display names, but not all. Now, you can view all available Angle and Display names when you are logged in, regardless of your system role.

Unable to specify max runtime for SAP extraction

The maximum run time of the refresh cycle time can be set in the IT Management Console. This run time included all phases of the refresh cycle. A setting has been added to configure the maximum run time of the extraction phase on SAP separately.

Scheduled time incorrect after switching to or from Daylight Saving Time

After a switch to or from daylight saving time, refresh cycles were sometimes not starting on the correct time until the Application Server was restarted. With this fix, no reboot is required.

Classification characteristics with multiple keyfields not supported correctly

The additional key and data fields functionality did not work well with the recently introduced MULTOBJ functionality. These features could not be used together since they were resulted in errors in the restructure process and incomplete data. This has now been fixed for both the regular and the delta restructuring.

Note that when the delta restructure is used, the additional key and data fields for a delta download will not be refreshed with data, as only the change records for the selected characteristics are downloaded. Therefore, changes in additional key and data fields will not be visible until the next full download.

Updated SAP Java Connector to version 3.1

The SAP Java Connector component that is used during extraction has been updated to version 3.1.

Incorrect handling of failure for newly added tables

Previously, the table files were only copied when the source folder contained a newer table. That is never the case for partial table downloads. This caused the table files in the workfolder to sometimes be incomplete and incorrectly shown as a successful download. This issue has now been resolved.

Automation tasks can be triggered by the "When new model available" task multiple times

To prevent automation tasks from running with old data after rebooting the server, automation tasks created with Event - When new model available are only triggered when a new model instance is created.

Automation tasks with trigger type "When new model is available" fail when model is not ready yet

Automation tasks that are set to the trigger type *Event* > When new model is available can fail when the model is not yet Queryable. You can now configure a delay in the IT Management Console to prevent this type of failure.

Automation task does not wait for script action to finish

The actions in an automation task are executed in sequence. You can control the sequence by changing the order. This mechanism does not work for program/script actions since those do not wait until the action is finished. To solve this, the task will now wait until the script signals that it is finished, before starting the next action.

Update to SQL fails if special characters are present in ID field

If a single quote or em dash was included in a key field of a table, and the Automation action was configured as "Update", the action would result in an error. These characters are now escaped properly when determining which rows are relevant to update.

Incorrect decimal separator in Export to CSV

Under specific conditions, the decimal separator was incorrectly exported for negative numbers when using the Export to CSV functionality. This has been fixed.

Server crashes when many schedule lines are created

Creating many Purchase Document (PD) schedule lines simultaneously could cause a server crash. This has been resolved.

Addressed log4j vulnerability

The log4j library has been patched to remove a vulnerability. It is recommended to run the following PowerShell script on the Application Server and the ETL Server to ensure it is completely mitigated:

```
$variableNameToAdd = "LOG4J_FORMAT_MSG_NO_LOOKUPS"

$variableValueToAdd = "true"

[System.Environment]::SetEnvironmentVariable($variableNameToAdd,
$variableValueToAdd, [System.EnvironmentVariableTarget]::Machine)

[System.Environment]::SetEnvironmentVariable($variableNameToAdd,
$variableValueToAdd, [System.EnvironmentVariableTarget]::process)

[System.Environment]::SetEnvironmentVariable($variableNameToAdd,
$variableValueToAdd, [System.EnvironmentVariableTarget]::User)
```