

Angles for SAP Release Notes

Version: 2020SP3

Contents

End user - Highlights	5
S2D: Cycle Counting Enhancements	5
Manage Angle Tags in Mass Change.....	5
O2C: Better understand changes made to Deliveries	5
Better understand changes made to Orders, Operations and Reservations	6
Communicate with the Every Angle stack via ODBC	6
Single Sign-On	7
End user - Usability improvements.....	7
Improved feedback and guidance when editing Displays that are used in Automation tasks	7
End user - Fixes and improvements.....	7
PM: Cost Totals added to PM Activity Diagram.....	7
QM: Field Quality Score upper and lower limit added to description.....	7
ONC: Introduction of Reference based PD/SD schedule lines.....	8
Visual update on Pivot Displays	8
PM: New field 'Annual Estimate in Display Unit'	8
PM: new reference added from Maintenance Plan Cycle/Counter to Equipment	9
QM: new references added from object Notification to the related Delivery Header/Item.	9
Added filename validation on module import	9
Improved Model Server selection for a refresh.....	9
Terminology changes	9
F2R: new references added from object Work order to Profit Center and Responsible Cost Center.....	10
Fixed issues	10
SD 1811 2595 Scientific notations in export output.....	10
SD 1909 1949 - Improved performance and stability of Mass Change functionality.....	10
Improved Application Server login performance	11
SD 0023 9013 - Scheduling Agreements Functionality Enhancements	11
Unwanted option to close the sidebar	11
SD 0024 3766 - Improved interaction when maximum sorting limit is exceeded	11
Fix concurrent login issues.....	11

- Authorization denies Angles with the 'Orders and Stocks' follow-up 12
- IT user - Highlights 12
 - IT: Insight in SAP IDoc Statuses..... 12
 - Analyze Automation tasks with EA4IT 12
 - Secure Simple RFC data extraction 13
- IT user - Usability improvements 13
 - Refresh Correlation ID 13
- IT user - Fixes and improvements 13
 - STXH table enabled by default in Delta refresh cycles 13
 - Clarified final refresh email subject 13
 - Prevent password logging in Model Agent logs 14
 - Model Server follows system defaults for TLS protocols 14
 - Model Server timeout setting used for all Model Server requests 14
 - Fixed backup from settings in Model Server setup 14
 - Model Server follows system defaults for TLS protocols 14
 - Custom condition can be removed in the Workbench..... 14
 - Improved datatype integrity for integer fields 15
 - Remove redundant status requests from AS to CMS 15
 - Pipe symbol (|) can be used in DefaultImage.cfg now, for APO 15
 - Guard against component registration data corruption 15
 - Clear error in setup log when PowerShell version is too old..... 15
 - Application Server startup tasks no longer intersect with user actions..... 15
 - Automatic database index optimization..... 15
 - Cannot login at busy times 16
- Fixed issues 16
 - SD 1905 7327 - Refresh task showed cancelled while cancellation was still in progress 16
 - SD 1908 9635 - GRC modules: incorrect dependencies with other optional modules 16
 - SD 1910 4504 - Restored missing error details in Automation task emails 16
 - Improved RFC copy error message 16
 - SD 0021 4000 - Minor security vulnerabilities found in security scan by Philips 16
 - SD 0026 1972 - Warning about multistructure demoted to normal message 17
 - Increased default timeout for deletion from old instances 17

Fix indexed access for tables with over 2 billion records 17

Datastore Drop down is greyed out..... 17

End user - Highlights

S2D: Cycle Counting Enhancements

To provide better insight into your cycle counting process, we have introduced new fields in the object *Material Plant*:

- Last Count Date: the date of the last physical inventory count.
- Material Never Counted: a check box indicating whether the material has been counted in the past or not. When the value is maintained in MARC-ABCIN and Last Count Date is not blank, then this field is True, otherwise False.
- Number of Days Passed: the number of days passed since the material was last counted.
- Planned Date of Inventory Count: the date on which the physical inventory count is planned to take place.

This enhancement will give you more control over your cycle counting process, resulting in better stock accuracy.

Manage Angle Tags in Mass Change

Select multiple Angles and manage Angle tags in bulk, using the existing Mass Change function. You can add or remove multiple tags in one go, making it very quick and easy to manage. Currently, only mass changing the Angle tags **General** and **Tags** is supported for multiple models simultaneously. Business process, search, and privilege labels can only be mass changed within a single model.

O2C: Better understand changes made to Deliveries

Which manual changes have been made to the confirmed delivery dates? Who removed the delivery blocks from these deliveries? These and many more questions arise daily when managing your daily operations. All the information needed to answer these delivery 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 EA model: *Delivery Document Changes* [Objectclass: LIEFERUNG]

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 de-activated, 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 EA functional support, or by your own EA administrator.

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

EINKBELEG	Tables	Description
LIEFERUNG	LIKP	Delivery Header Data
	LIPS	Delivery Item data
	VBPA	Sales Document Partner
	VBUK	Sales Document Header Status

Better understand changes made to Orders, Operations and Reservations

Which changes have been made to the order planning start dates? Who made changes to the operations? Are the reservation quantities /dates changed? These and many more questions arise daily when managing your daily operations. All the information needed to answer these order 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 EA model: *Order Changes* [Objectclass: Order]

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 de-activated, 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 EA functional support, or by your own EA administrator.

Summary of the tables included in this Order change object:

Order	Tables	Description
Order Changes	AUFK	Order Master
	AFKO	Production Order Header
	AFPO	Production Order Item
	AFVC	Operations within an order
	AFVV	Operations within an order; Quantities/Dates/Values
	RESB	Reservation / Dependent requirements
	AFIH	Plant Maintenance Order Header
	IHPA	Plant Maintenance; Partners
	ILOA	Plant Maintenance; Object Location & Account Assignment

Communicate with the Every Angle stack via ODBC

With this release you can communicate and retrieve data via an ODBC driver delivered by SIMBA. This enables you to connect your Data Lake or BI Solutions to Every Angle and get the data when you need it.

Single Sign-On

With Single Sign-On you are no longer prompted for your username or password when logging on to the Every Angle suite. Authentication is done via one of the following providers. If you are already authenticated via one of these providers, you will be logged on to Every Angle:

- ADFS
- Active directory
- Okta
- SAML

Each option will be visible on the logon screen when they are configured in the IT Management Console.

Exception: For the option, Local server users, you will still need to enter your credentials.

When logging out, you will log out of all Every Angle applications and be redirected to the logon page.

End user - Usability improvements

Improved feedback and guidance when editing Displays that are used in Automation tasks

Editing Displays that are used by Automation tasks can cause serious failures. It is important that users are aware of this. As of this release, users will be prompted with a popup window, showing detailed information about the Automation tasks that have the Displays in use. It shows the name of the task and its owner, and, if allowed in the users' role, a link is available to open the task in the IT MC so that further action can be taken.

End user - Fixes and improvements

PM: Cost Totals added to PM Activity Diagram

In the PM Activity Diagram, we have replaced the obsolete button **Maintenance Call Performance** in the performance area, with the button **Cost Totals**. The **Cost Totals** button is linked to the template *Controlling Cost Totals*, giving insight into PM related planned and realized costs.

QM: Field Quality Score upper and lower limit added to description

In the field *Quality Score*, the result of the quality inspection score is shown based on the SAP field QKENNZ AHL, and the upper and lower limits from table TQ56 (quality score groups). To make the interpretation of these results easier, we have added the upper and lower limit (range) of the quality score groups to the description of the field.

ONC: Introduction of Reference based PD/SD schedule lines

In SAP, there are multiple events for a sales or purchase document like:

- Creation of delivery note
- Creation of inbound delivery note
- Goods receipt
- Goods receipt reversal
- Goods issue
- Invoice receipt
- Invoice receipt cancelations

These events are created on a specific date and for a specific quantity. In Every Angle, these events are used to create the SD/PD schedule line. In case of multiple events, or events having quantities that differ from the quantity of the sales/purchase order, Every Angle creates multiple schedule lines each linked to the specific event for that specific quantity, showing the dates of that event.

With the introduction of reference-based PD/SD schedule lines, Every Angle checks if for each event a related reference number (XBLNR or delivery note number), batch number (CHARG), and reference document (LFBNR) is available. As a result, different schedule lines can be created when the old FIFO matching is different from the specific matching logic (using the reference document/batch number/reference number).

This has improved the correctness of our schedule line logic. The biggest impact of this improvement will be on:

- Stock transfer purchase orders and purchase orders with confirmations, since they have multiple events that are now better 'aligned' (using the new matching logic).
- Confirmations, since they have a specific reference number that can also be used in the goods receipt.
- Stock transfer orders, since they have outbound deliveries that are now matched to the specific related goods issue movements.

Visual update on Pivot Displays

The Pivot Display has been given a visual update to get the styling in line with the modernized look and feel of the Web Client.

PM: New field 'Annual Estimate in Display Unit'

The new field *Annual Estimate in Display Unit* has been added to the PM object Measuring Point.

This field shows the Annual Estimate of the unit of measurement for Measuring Point Characteristic (SAP transaction IK03), or 'display' unit. The field is calculated by converting the Annual Estimate in SI Unit (IMPTT-PYEAR), defined in the standard SI Unit dimension (T006D-MSSIE), to the Characteristic Unit of Measurement (CABN-MSEHI).

This will simplify the reading of your data without having to manually convert from SI Unit to your display unit on the measurement point.

PM: new reference added from Maintenance Plan Cycle/Counter to Equipment

A new reference from the object *Maintenance Plan Cycle/Counter* to the object *Equipment* has been added to the PM model. This will enable you to expose all equipment related to the maintenance plan.

QM: new references added from object Notification to the related Delivery Header/Item

A new reference from the object *Notification* to the object *Delivery Note Header/Item* has been added to the QM model. Starting from a quality notification, this will allow you to expose any related delivery notes. As the reference to Notification is an exploding reference, the reference will also be available on Notification Activity, Notification Cause, Notification Item, and Notification Task.

Added filename validation on module import

Module filenames are now validated when importing content in the Workbench. The import will fail when it contains modules with invalid filenames. This solves that you could have invalid filenames in the Repository that you could not fix anymore.

For completeness, the validation error message is extended with the fact that a module name must not end with a . (dot).

Improved Model Server selection for a refresh

When you have multiple Model Servers, the refresh uses the Model Server with the oldest data. However, this did not account for the situation that the oldest one could also be the *only one* that is available. This leads to unneeded downtime.

This could happen when the newer one failed to import in the Application Server, leaving the older one as the only available one. This is now fixed by not only looking at the age of the model, but also at availability in the Application Server.

Terminology changes

The following short and long names have been changed, for consistency purposes:

English

Old EN short name	New EN short name
Act. Mat. Leg. Contr. Level	Act. Mat. Leg. Contr. Lev.
Old EN long name	New EN long name
Number of Active Mataterials on Legal Control Level	Number of Active Materials on Legal Control Level

Dutch

Old NL short name	New NL short name
# Actieve Art. Wet. Contr. Niveau	# Act. Art. Wet. Contr. Niv.

F2R: new references added from object Work order to Profit Center and Responsible Cost Center

On the object *Work Order*, references to *Profit Center* and *Responsible Cost Center* have been added. This will enable the analysis on *Work Order per Profit Center*.

Due to this change, also the existing reference to the cost center was improved, showing the correct result for all work orders.

Fixed issues

SD 1811 2595 Scientific notations in export output

Fixed an issue that caused the *EATableIndexer* and further processing in feedback loops to fail. The reason for the failure was that number values with multiple decimals were written in the scientific notation. This happened in several datastores. In an Export to CSV, for instance, a value like '0,000240' would be saved as '2,4E-6'.

A solution has been implemented to make sure this type of notation is never applied in export outputs.

SD 1909 1949 - Improved performance and stability of Mass Change functionality

The stability of the Mass Change functionality has been improved.

Improved Application Server login performance

With many concurrent users the Application Server did not scale as intended and users experienced slowness and often the inability to login. This was mostly caused by inefficiencies in the way user sessions were handled and this is now greatly improved.

We addressed the following technical areas regarding user sessions:

- Reduced cache size on session scope by centralizing the model fields cache
- Improved garbage collection handling
- Removed unnecessary locking
- Removed a redundant call on login

SD 0023 9013 - Scheduling Agreements Functionality Enhancements

Every Angle has resolved several inconsistencies between SAP MD04, SAP MD73, and the MRP-relevant SD schedule lines in Every Angle (related to SAP SD schedule agreements) by:

- Adding the confirmed quantity of Forecast schedule, JIT schedule and Planning Delivery Schedule.
- Using the corrected quantity [VBEP-CMENG] to determine the relevance for MRP/MD04 (is requirement yes/no?).
- Adding an additional schedule line, when corrected quantity > ordered or confirmed quantity.
- Determining the requirements date based on the correct release (FS, JIT or PDS): 'correct' means the one that is MRP-relevant (based on the related schedule line category). This impacts the consumption of planned independent requirements by open SD schedule agreement requirements.

Unwanted option to close the sidebar

We've removed a hidden and unwanted option to close the sidebar by double click.

SD 0024 3766 - Improved interaction when maximum sorting limit is exceeded

Users can now easily restore the previous state of the Display when trying to sort a Display that exceeds the maximum sorting limit. The sorting will be removed and all changes are restored, including unsaved changes in the Angle.

Fix concurrent login issues

Concurrent logins from users with the same authorization profile could lead to login failures. This resulted in accessibility issues during the 'morning rush' for a large customer. This is now fixed.

Authorization denies Angles with the 'Orders and Stocks' follow-up

The 'Orders and Stocks' and several less used follow-ups wrongly reported that they could potentially deliver all existing classes as the result of the follow-up. This led to denial to execute the Angle when the user has an authorization profile that denies any class. For example by a widely used authorization profile that denies FiCo classes for a user. This is now fixed, by reporting the correct classes that those follow-ups can deliver.

IT user - Highlights

IT: Insight in SAP IDoc Statuses

An IDoc (Intermediate Document) is a standard data structure used in SAP applications for electronic data transfer between systems, for example the communication with your suppliers or customers. It is essential that this communication is flawless to create an efficient integrated operation. For this reason, it is key to have good insight into the statuses of the created IDocs. Have they been processed successfully, or have errors occurred during processing? In case of the latter, what is the cause?

To support this, the new object SAP IDoc Display has been introduced in the IT business process. This object is based on the SAP tables EDIDC SAP Control record (IDoc) and EDIDS SAP Status Record (IDoc).

Apart from this object, a template has been created to give you a quick start on tracking the IDoc statuses. This template (SAP IDoc Status) has four different Displays:

- Basic List: all IDoc related data such as IDoc Type, Direction (in- or outbound), Sender Partner, IDoc and Message Creation Date, and IDoc Message Type
- Number of IDoc Messages Created Last 14 Days (in- or outbound)
- Number of IDoc Errors Created Last 14 Days (in- or outbound)
- IDoc Error Messages Last 14 Days: per system, in- or outbound, Sender Partner, Message Type and IDoc Status

Analyze Automation tasks with EA4IT

Three new objects have been added to the EA4IT model, enabling users to analyze and build Angles on Automation tasks:

- Automation Tasks
- Automation Task Actions
- Automation Task Arguments

These enable you to get full insight on how Automation tasks are used in your system (how many and how often are Angles exported automatically) and to expose peak hours in which many tasks run and stay in control of the system load.

We will continue to add more content to the Automation Tasks in EA4IT in the next release.

Secure Simple RFC data extraction

With 2020SP3 the SIMPLE RFC data extraction can be done securely via the well known SNC protocol of SAP. Allowing the data to be transferred between SAP and Every Angle secure.

IT user - Usability improvements

Refresh Correlation ID

The **Refresh correlation ID** option has been introduced to help users find log messages from all component services related to a specific refresh using a unique identifier, so it is easier to troubleshoot actions that span multiple component services and machines.

Each component that is affected in the refresh now has a correlation ID which allow you to link each log to a refresh. This ID is now also visible in EA4IT and the EAMonitor.

IT user - Fixes and improvements

STXH table enabled by default in Delta refresh cycles

The STXH table is now by default enabled for delta refresh cycles. Since the STXH table is often a large table, this will potentially shorten your refresh cycle, improving the availability (server live) of the Every Angle system for your users.

Clarified final refresh email subject

When import from metadata fails, the refresh cycle emitted two failure emails with different bodies. This has now been fixed. Also the refresh emails with the final status have been clarified:

Old email subject	New email subject
Refresh finished	Refresh finished - OK
Refresh failed	Refresh finished - Failed

There is no impact on monitoring because this uses the json attachments.

Prevent password logging in Model Agent logs

When you updated settings in the IT Management Console, the Model Agent could log the changed passwords, leading to an insecure situation. The passwords are now masked.

Model Server follows system defaults for TLS protocols

The Model Server now follows the Windows settings for TLS protocols, just like the other components. See the [Microsoft documentation](#) for protocol (de)activation. When both TLS 1.1 and TLS 1.2 are disabled, the Model Server will run with TLS 1.0 regardless of the configured protocols. So it will not run lower than TLS 1.0.

Note: TLS 1.3 is not yet officially supported because it is not yet declared ready for production by Microsoft.

Model Server timeout setting used for all Model Server requests

The setting **Model server timeout** [seconds] in the ITMC is used again for all requests to the Model Server. With previous changes on connection re-use, this setting was no longer used. This has now been fixed.

Fixed backup from settings in Model Server setup

The installer from the Model Server creates a backup with all current settings before it installs the new version. This backup was only created when installing into the default installation folder. This has now been fixed.

Model Server follows system defaults for TLS protocols

The Model Server now follows the Windows settings for TLS protocols, just like the other components. See the [Microsoft documentation](#) for protocol (de)activation. When both TLS 1.1 and TLS 1.2 are disabled, the Model Server will run with TLS 1.0 regardless of the configured protocols. So it will not run lower than TLS 1.0.

Note: TLS 1.3 is not yet officially supported because it is not yet declared ready for production by Microsoft.

Custom condition can be removed in the Workbench

For some tables, a custom condition is seeded from Standard Content. Sometimes you want to change this condition and sometimes you might want to remove it altogether. But removing this condition was not possible in the Workbench. This has now been fixed.

Improved datatype integrity for integer fields

Fields with **Double datatype** casted to **Integer** in the model definition were still represented as a **Double** in the API. This was noticeable when using the ODBC driver (not in the Web Client). The field data is now properly converted to an **Integer**.

Remove redundant status requests from AS to CMS

The Application Server performed a status request to the Model Server before checking query progress. This is not needed and is now removed to reduce stress on the Model Server.

Pipe symbol (|) can be used in DefaultImage.cfg now, for APO

Improved XML parsing in Xtractor. This solves the issue that you could not use a pipe symbol (|) in DefaultImage.cfg. This symbol is needed for the APO module.

Guard against component registration data corruption

Component registration data could become corrupt during forceful termination from the Application Server, like during a reboot. The corrupt data causes an availability issue because the components cannot communicate anymore.

The guarding mechanism against file corruption has been updated and corruption should be handled correctly after this fix. Just in case it might still occur, the registration data is logged on errors, making it easier to troubleshoot. But this should not be necessary anymore.

Clear error in setup log when PowerShell version is too old

The setup requires PowerShell 5.1. The logs now show a clear error message when this version is not available:

```
<script> cannot be run because it contained a "#requires" statement for Windows PowerShell 5.1. The version of Windows PowerShell that is required by the script does not match the currently running version of Windows PowerShell <version>
```

Application Server startup tasks no longer intersect with user actions

The Application Server startup tasks could intersect with user actions. This could result in failing user actions, like a refresh that was started very quickly after service start. The startup tasks are now handled before the Web API is made available. This means that if you can login, you can now safely execute all actions.

Automatic database index optimization

Fragmented database indexes could severely reduce database performance, leading to availability issues, mostly because model metadata could not be imported anymore. The Application Server

now rebuilds the indexes on startup, ensuring proper performance. The index rebuild is executed on the background and does not affect normal use.

Cannot login at busy times

The Application Server used could a lot of memory (~10GB) when executing Angles that contain fields with large sets. The Garbage Collection process (ie: memory clean-up) could pause the application, leading to CMS ping timeouts, leading to a Model Server switch. This switch added high load where load was already high. The result was that the Application Server became unresponsive for a long time. The high memory allocation is now fixed.

Fixed issues

SD 1905 7327 - Refresh task showed cancelled while cancellation was still in progress

When a refresh task is cancelled, it should show status 'cancelling' and move to status 'cancelled' when the cancellation is fully done. However, it jumped to 'cancelled' right away, while the cancellation was still in progress. This has now been fixed.

SD 1908 9635 - GRC modules: incorrect dependencies with other optional modules

Due to incorrect dependencies between different GRC Modules (Basics, Free and Full set) and other optional modules, errors could occur in the error log. This has now been fixed. As a result, when any combination of GRC modules is turned on with only SCMBasic, no more errors will be created when the server is loaded.

SD 1910 4504 - Restored missing error details in Automation task emails

Error details of failed Automation tasks were not visible in automatic emails that are sent upon task completion. This has been fixed.

Improved RFC copy error message

If, after downloading a table with RFC copy a file is still missing locally, the following is added to the error message about the download failure: **The file is pushed somewhere else or is not pushed at all.** This helps to identify the most likely cause, that another EA server with the same RFC destination received the file. RFC destinations must be unique.

SD 0021 4000 - Minor security vulnerabilities found in security scan by Philips

Resolved various security vulnerabilities in the Web Client and IT Management Console that were found in a security scan performed by Philips. Some of the found issues were already fixed in previous releases.

SD 0026 1972 - Warning about multistructure demoted to normal message

Messages like the following are not actionable and are therefore demoted from warning to regular message:

Table"EKES_GA" is empty, column will not be added to the multistructure

Increased default timeout for deletion from old instances

The default timeout for old instance deletion is increased from 30 seconds to 3 minutes. This avoids degrading Application Server performance from old instances that are piling up, because they can no longer be deleted in a timely fashion.

Fix indexed access for tables with over 2 billion records

The data access layer could no longer use indexed access (aka FindKey) for records beyond the 2 billion range. A noticeable effect was that *EATableRestructurer* could no longer process IBIN classification for one customer. This is now fixed. It is not likely that other customers will encounter this issue soon.

Next to this the *EATableRestructurer* has performance improvements of around 5-10%. Your mileage may vary because there are multiple circumstances that determine the net result.

Please note that, when installing this as a hotfix, you also need to **import Standard Content** into the Workbench. This content contains a technical setting for *EATableRestructurer* (in SAPConversion.ini) and contains **no functional changes**.

Datastore Drop down is greyed out

When creating a new automation Action, the Datastore Drop down is greyed out. This is now fixed.