Managing Deprecations in SAP S/4HANA Cloud

PUBLIC EDITION

2023.12

I do…because of you.

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Introduction

(To) deprecate. Whilst this is something that has been around for probably...ever, it has become more prominent over time as the pace of innovation is relentlessly getting faster and faster and companies wanting to innovate understand that it is not on yesterday's technology that you will engineer tomorrow's Cloud. Whilst the concept of *Deprecating something* is not limited to cloud, as it also applies to on-premise software and everything in between, it is probably more so applicable to cloud solutions (that is SaaS), where the updates and upgrades are that much more frequent, and the timing of these updates and upgrades is imposed on at known dates and times by the service provider, rather than decided on, or requested by customers.

Every software company, irrespective of the mode of delivery of their software, will deprecate - that is not something specific to SAP, but of course what and how something is deprecated will be specific to a company.

Thank you for taking the time to download this document - I hope you get something out of it. If there are specific use cases that you would like to see covered in - maybe - future updates, do not hesitate to get in touch and let me know.

Please note that the content provided in this document is a personal viewpoint.

Purpose

This document has been put together, to try and assemble in one place all the key references that you need to be aware of in the context of deprecations, in the hope that it will help you go through upgrades with more knowledge, confidence and efficiency. The point of this document is not to copy/paste all the information that is available to you on the internet, but simply to point you in the right direction of where to find it.

The aim is to help you be more informed, by knowing where you can find information on deprecated objects, inside and outside of your system, what tools and applications are available to help you digest deprecations and what the individual deprecation policies of deprecated objects are.

This document is essentially in two parts. The first part will be more informational and cover deprecations in general, whereas the second will be more practical and offer a specific focus on the deprecation of Core Data Services (CDS). By looking at a couple of realistic CDS deprecation uses cases (a custom CDS used in an analytical reporting context and a custom CDS exposed as an external API), we will look at the changes that we need to perform in the SAP S/4HANA Cloud system, offering detailed step by step instructions, in order to successfully navigate the deprecation of CDS entities or CDS elements.

Lastly, this document is specifically written for and targeted at users of SAP S/4HANA Cloud, public edition. Whenever a reference is made to SAP S/4HANA Cloud, it is intended to mean the public edition of it.

Deprecate. A definition

Deprecate /ˈdɛprɪkeɪt/

Verb

Express disapproval of. (chiefly of a software feature) be usable but regarded as obsolete and best avoided, typically because it has been superseded. "*this feature is deprecated and will be removed in later versions*"*

Before going further in this document, it probably makes sense to start by trying to define what a deprecation actually is. So whilst objects are deprecated with a different cadence and maybe a different apparent lifecycle, the following is a general personal definition that I would put forward to define the term deprecation.

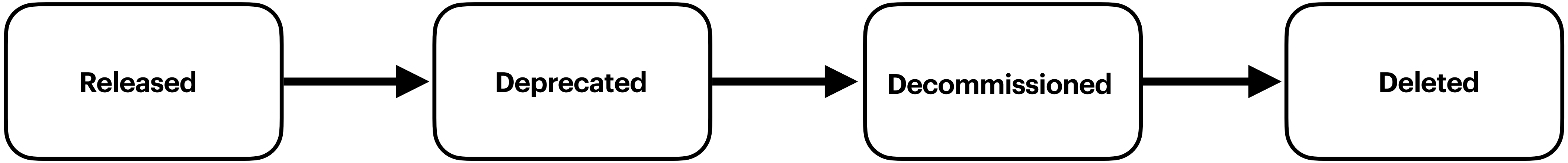
"A Deprecation is when a feature or function that is for now still available, has a more effective successor. From the time of its announcement, adoption of a deprecated object for new uses is strongly discouraged. Furthermore, if the deprecated object is used, every effort to transition to the successor object should be made, before the deprecated object is no longer supported or available, to avoid a disruptive, regressed, or complete loss of functionality. "

You should familiarise yourselves with the object specific lifecycle, deprecation policies and timelines to plan your changes accordingly and execute them serenely.

* Definition from Oxford Languages

Lifecycle of objects

Following the definition of *Deprecate*, we probably also need to clarify where this fits within the lifecycle of an object. Outwardly, to customers objects may use different words to reflect their - technical - lifecycle status (to reflect their availability, usability, supportability…), but generally speaking, the lifecycle of an object will be as depicted below.



Released

Deprecated

Decommissioned

Deleted

- **Released** : With this technical status, the object is released for use by customers. The object is maintained for productive usages and can possibly benefit from enhancements (for example, performance enhancements, or the addition of additional field(s), etc.…).
- **Deprecated**: With this technical status, this signals to customers that there is now a need to adapt - to transition to a successor object. Depending on the object, the deprecation clock is now ticking, and there is a risk that if no action is taken - to transition to a successor object - by the end of the deprecation period, that the deprecated object will no longer function as previously or indeed still be available.
- **Decommissioned**: From a user point of view this status is used here to represent a phase where the object might possibly still exist in the system but is no longer supported (in which case it must not be used) or cannot be used by design.
- **Deleted**: Should be self-explanatory, the object is deleted from the system. Any references to it would be errors.

What objects are Deprecated in SAP S/4HANA Cloud ?

As the technology components that are leveraged to offer SAP S/4HANA Cloud evolve, then so may the type and number of objects that are deprecated. At the time of writing this document the most noteworthy objects that are deprecated are the following:

- **IAM** (Identity Access Management) objects. This typically includes Business Catalogs or Template Business Roles but can also represent Restrictions,
- **Apps** (Short for application), irrespective of the technology powering the app (Fiori, webdynpro..). An app is typically represented as a 'tile' on your Fiori Launchpad,
- **CDS** (Core Data Services). This refers to an entire CDS entity, or element(s) contained within a CDS,
- **API** (Application Programming Interface). In this sense I refer to API as an *external* API, that is used for communications to occur between two connected systems (whether inbound or outbound).

Deprecation Policies

The deprecation policies and deprecation timelines (i.e how much time do you have to adapt) that apply to the individual objects are not identical, and thus it is important for you to know what they are, so that you may organise your transition activities knowing exactly how much time you have before an object reaches the end of its deprecation period. For example the deprecation period of an app, is different to that of a CDS.

The table below will recapitulate for each object where you can find more information regarding their respective deprecation policies.

Object	Link to Policy
Core Data Services (CDS) and CDS elements	Link | Lifecycle of a released CDS
Application Programming Interface (API)	Link
Applications (Apps)	Link
Business Catalog	Link

Where to find information on Deprecated objects

In this section we will present the various information sources that are available to you, to find out more about deprecations.

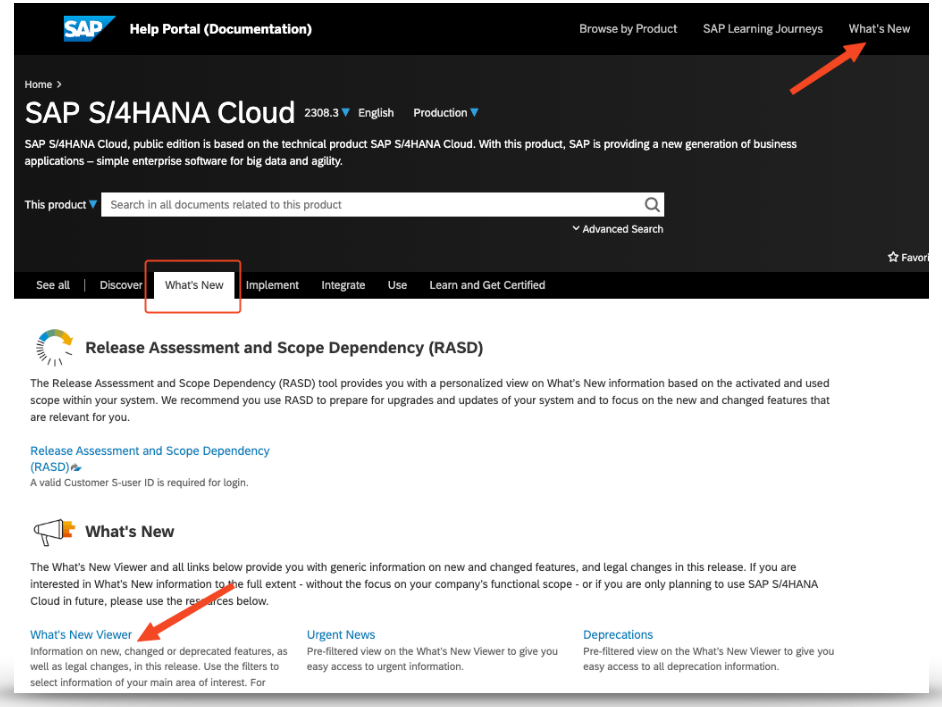
Some will reside in well known information sources outside you SAP S/4HANA Cloud system such as the What's New viewer, SAP S/4HANA Cloud Help, Release Assessment and Scope Dependency (RASD) tool, blogs, etc.., some will be inside your SAP S/4HANA Cloud system.

We'll start with the former.

Outside SAP S/4HANA Cloud

The What’s New Viewer

The What’s New Viewer for SAP S/4HANA Cloud provides with you with an exhaustive source of information pertaining to all novelties, changes (including legal changes) and deprecations. However, please note that deprecations only happen during a major release (I.e 2302, 2308..), and not during intermediates updates (2302.*2*, 2308.*4*,…) in between major releases.



SAP S/4HANA Cloud, public edition is based on the technical product SAP S/4HANA Cloud. With this product, SAP is providing a new generation of business applications – simple enterprise software for big data and agility.

Release Assessment and Scope Dependency (RASD)

The Release Assessment and Scope Dependency (RASD) tool provides you with a personalized view on What’s New information based on the activated and used scope within your system. We recommend you use RASD to prepare for upgrades and updates of your system and to focus on the new and changed features that are relevant for you.

Release Assessment and Scope Dependency (RASD)
A valid Customer S-user ID is required for login.

What's New

The What's New Viewer and all links below provide you with generic information on new and changed features, and legal changes in this release. If you are interested in What's New information to the full extent - without the focus on your company's functional scope - or if you are only planning to use SAP S/4HANA Cloud in future, please use the resources below.

What's New Viewer
Information on new, changed or deprecated features, as well as legal changes, in this release. Use the filters to select information of your main area of interest. For

Urgent News
Pre-filtered view on the What's New Viewer to give you easy access to urgent information.

Deprecations
Pre-filtered view on the What's New Viewer to give you easy access to all deprecation information.

You can access the What’s New viewer from the main SAP S/4HANA Cloud help page as shown, or directly bookmarking this link.

From the main help landing page, go to the What’s new tab, and from there, click anyone of the links shown in the What’s New section to access the What’s New viewer.

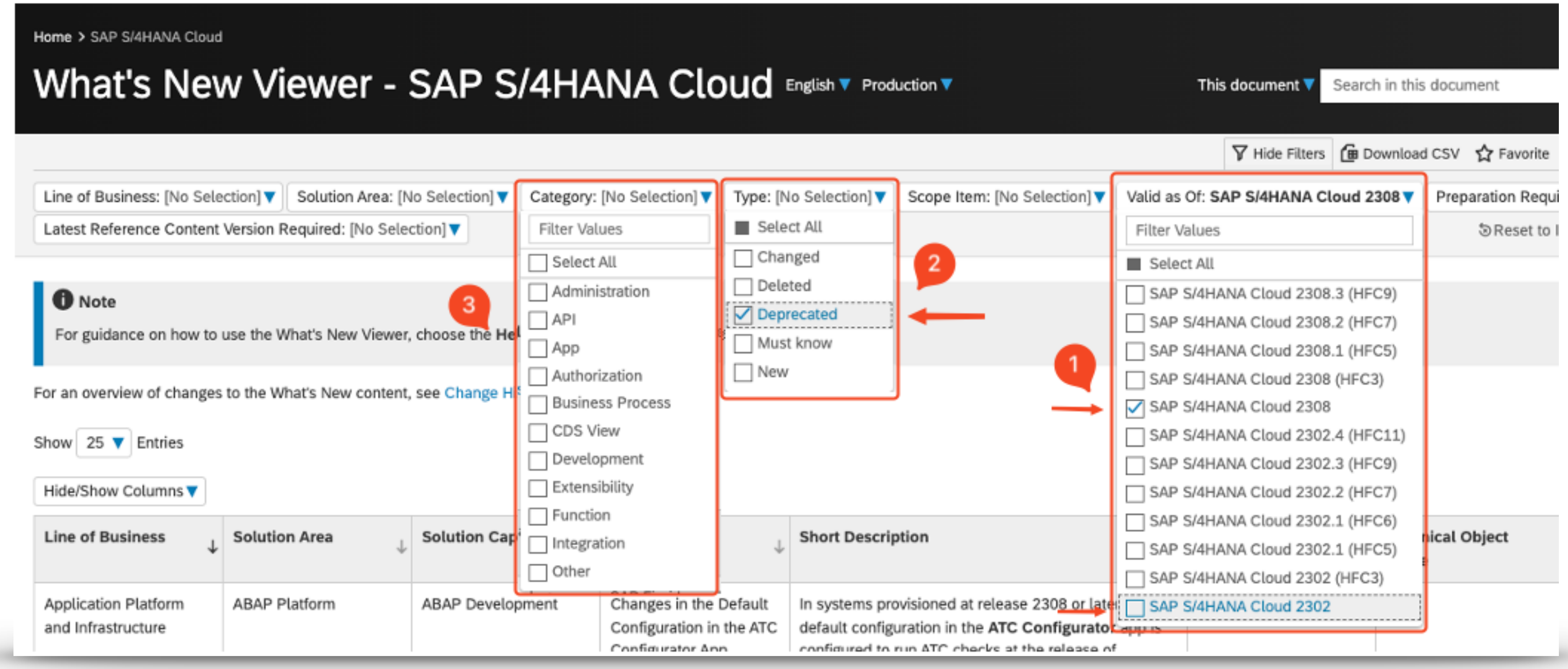
Also note that ahead of a release, about one month prior, a preliminary version of the What’s New viewer content will be published. But as the name ‘preliminary’ indicates, the preliminary content is subject to change and may differ from the final content, when the latest version of SAP S/4HANA Cloud is RTC (Released To Customers).

The What’s New Viewer provides *ALL* the information pertaining to an upgrade or update. i.e it is not specific to your usage of the SAP S/4HANA Cloud system.

Once you reach the What's New viewer landing page, you may need to adjust the filters in order to be able to limit the information shown to Deprecated items. To do so:

1. Make sure you select a full release, not an in between update,
2. Select the announcement Type value to Deprecated,
3. Fine tune your selection to limit the deprecations output to specific categories, or you can also choose to view them all independent of category.

This is not shown, but you can further limit the data output to specific lines of business and/or solution areas and/or scope items, which is handy if you are for example responsible, or only interested in a particular area such as Finance or Supply Chain.



Home > SAP S/4HANA Cloud

What's New Viewer - SAP S/4HANA Cloud English ▼ Production ▼

This document ▼ Search in this document

Hide Filters | Download CSV | Favorite

Line of Business: [No Selection] ▼ | Solution Area: [No Selection] ▼ | Category: [No Selection] ▼ | Type: [No Selection] ▼ | Scope Item: [No Selection] ▼ | Valid as Of: **SAP S/4HANA Cloud 2308** ▼ | Preparation Requi

Latest Reference Content Version Required: [No Selection] ▼

Reset to

Category:
Filter Values
□ Select All
□ Administration
□ API
□ App
□ Authorization
□ Business Process
□ CDS View
□ Development
□ Extensibility
□ Function
□ Integration
□ Other

Type:
■ Select All
□ Changed
□ Deleted
☑ Deprecated
□ Must know
□ New

Valid as Of:
Filter Values
■ Select All
□ SAP S/4HANA Cloud 2308.3 (HFC9)
□ SAP S/4HANA Cloud 2308.2 (HFC7)
□ SAP S/4HANA Cloud 2308.1 (HFC5)
□ SAP S/4HANA Cloud 2308 (HFC3)
☑ SAP S/4HANA Cloud 2308
□ SAP S/4HANA Cloud 2302.4 (HFC11)
□ SAP S/4HANA Cloud 2302.3 (HFC9)
□ SAP S/4HANA Cloud 2302.2 (HFC7)
□ SAP S/4HANA Cloud 2302.1 (HFC6)
□ SAP S/4HANA Cloud 2302.1 (HFC5)
□ SAP S/4HANA Cloud 2302 (HFC3)
□ SAP S/4HANA Cloud 2302

Note
For guidance on how to use the What's New Viewer, choose the He

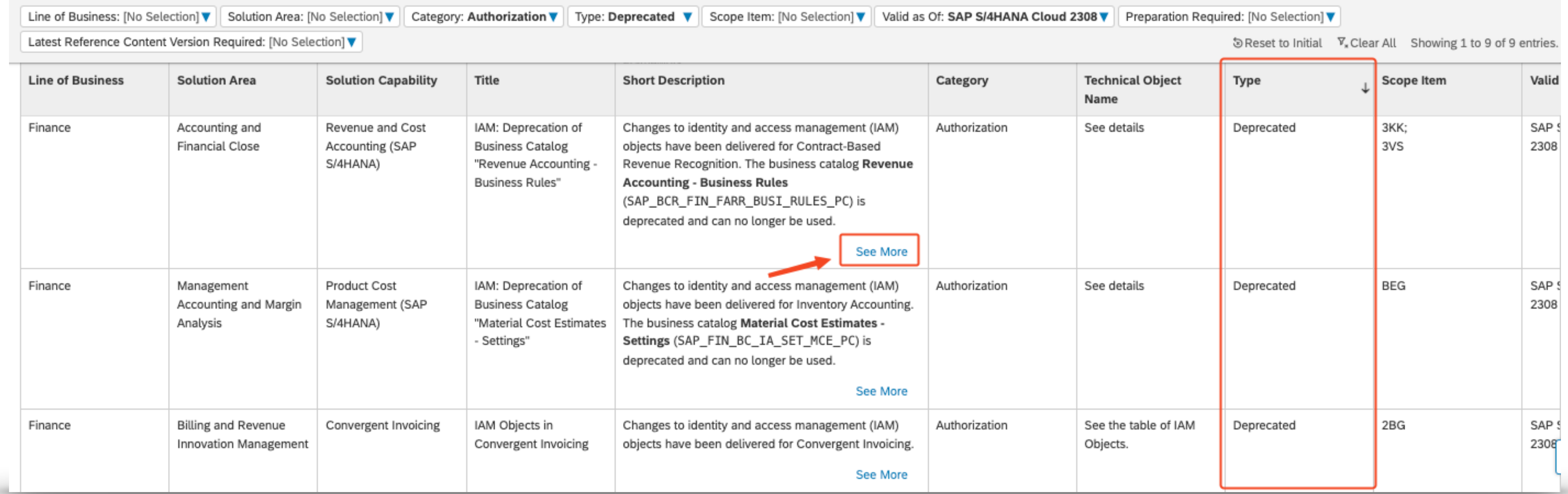
For an overview of changes to the What's New content, see Change H

Show 25 ▼ Entries

Hide/Show Columns ▼

Line of Business	Solution Area	Solution Cap		Short Description	ical Object
Application Platform and Infrastructure	ABAP Platform	ABAP Development	Changes in the Default Configuration in the ATC Configurator App	In systems provisioned at release 2308 or late default configuration in the **ATC Configurator** app is configured to run ATC checks at the release of	

Once you have made your selections, a list of matching items corresponding to it will be output, such as the one below. Note that all items have the type 'Deprecated'. For each item that appears on this list, there will be a succinct description giving you a high level overview of the deprecated item, but you can then also click on the *See More* hyperlink, to access more detailed information on it.



Line of Business: [No Selection]▼ Solution Area: [No Selection]▼ Category: **Authorization**▼ Type: **Deprecated** ▼ Scope Item: [No Selection]▼ Valid as Of: **SAP S/4HANA Cloud 2308**▼ Preparation Required: [No Selection]▼

Latest Reference Content Version Required: [No Selection]▼

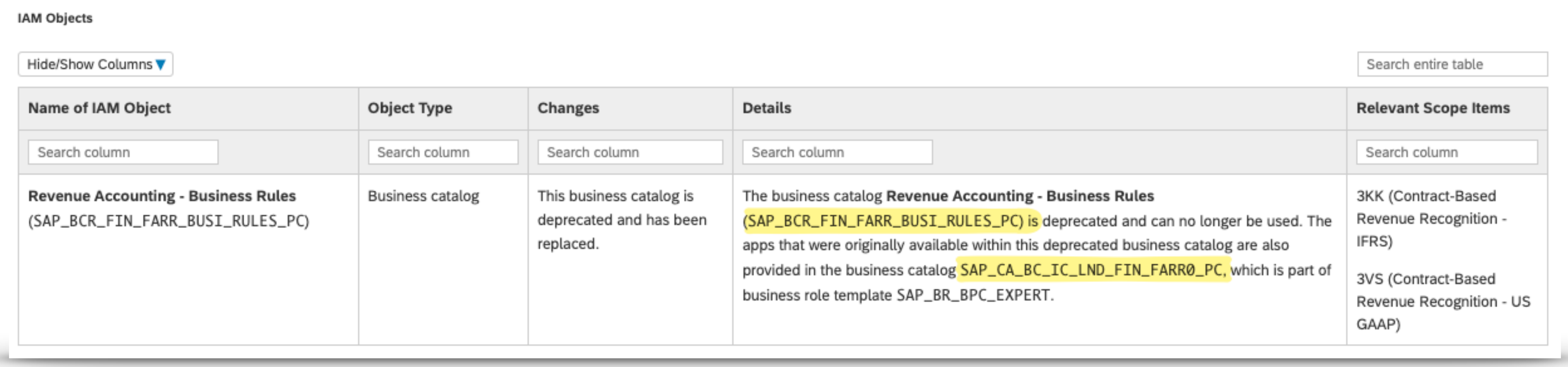
Showing 1 to 9 of 9 entries.

Line of Business	Solution Area	Solution Capability	Title	Short Description	Category	Technical Object Name	Type	Scope Item	Valid
Finance	Accounting and Financial Close	Revenue and Cost Accounting (SAP S/4HANA)	IAM: Deprecation of Business Catalog "Revenue Accounting - Business Rules"	Changes to identity and access management (IAM) objects have been delivered for Contract-Based Revenue Recognition. The business catalog **Revenue Accounting - Business Rules** (SAP_BCR_FIN_FARR_BUSI_RULES_PC) is deprecated and can no longer be used. See More	Authorization	See details	Deprecated	3KK; 3VS	SAP S 2308
Finance	Management Accounting and Margin Analysis	Product Cost Management (SAP S/4HANA)	IAM: Deprecation of Business Catalog "Material Cost Estimates - Settings"	Changes to identity and access management (IAM) objects have been delivered for Inventory Accounting. The business catalog **Material Cost Estimates - Settings** (SAP_FIN_BC_IA_SET_MCE_PC) is deprecated and can no longer be used. See More	Authorization	See details	Deprecated	BEG	SAP S 2308
Finance	Billing and Revenue Innovation Management	Convergent Invoicing	IAM Objects in Convergent Invoicing	Changes to identity and access management (IAM) objects have been delivered for Convergent Invoicing. See More	Authorization	See the table of IAM Objects.	Deprecated	2BG	SAP S 2308

Whilst the information provided in the details will be important, probably the most important pieces of information will be those referencing the names of the deprecated and successor objects. I.e the object that replaces the one that is deprecated. If this item applies to you, you will then be able to jump into your SAP S/4HANA Cloud system and process the deprecation (I.e replace the deprecated object with its successor).

This is highlighted in the example below where an announcement is made, to say that a business catalog is deprecated, and if you want to continue using the apps from that deprecated catalog, then you should perform a system adaption and use the successor business catalog (in other words, revise the business role(s) that use the deprecated catalog, and update them with the new successor business catalog.

Whilst I have in this case used a business catalog to illustrate my example, the same principle should apply irrespective of the deprecated item category being considered (app, CDS view, etc...)



IAM Objects

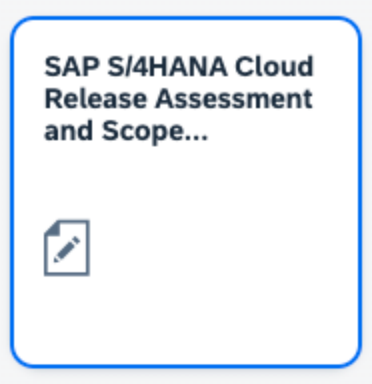
Name of IAM Object	Object Type	Changes	Details	Relevant Scope Items
Search column	Search column	Search column	Search column	Search column
Revenue Accounting - Business Rules (SAP_BCR_FIN_FARR_BUSI_RULES_PC)	Business catalog	This business catalog is deprecated and has been replaced.	The business catalog **Revenue Accounting - Business Rules** (SAP_BCR_FIN_FARR_BUSI_RULES_PC) is deprecated and can no longer be used. The apps that were originally available within this deprecated business catalog are also provided in the business catalog SAP_CA_BC_IC_LND_FIN_FARR0_PC, which is part of business role template SAP_BR_BPC_EXPERT.	3KK (Contract-Based Revenue Recognition - IFRS) 3VS (Contract-Based Revenue Recognition - US GAAP)

In the RASD (Release Assessment and Scope Dependency) app

In the previous section, we introduced the What's New viewer. Being publicly available, the information that is presented there, is going to cast a very wide net and apply to ALL areas of SAP S/4HANA Cloud, irrespective of your usage of SAP S/4HANA Cloud. Whilst this might be just what you need to understand the novelties that are offered with a new release or an update, when it comes to deprecations, you probably want to hone in on those that affect you, because you actually use them and you have to do something about them!

For this, the RASD app becomes very handy because it offers you information that is based on your specific usage of the system! So firstly, how do you access it? Well it is a very easy to remember URL which is https://www.sap.com/RASD . In order to log on to it, you will need to have an S-User id, connected to the company to which the SAP S/4HANA Cloud system(s) belong to. At the time of writing this document, RASD only provides information in relation to SAP S/4HANA Cloud, Public Edition.

Once you have access to the launchpad of RASD, you can't go wrong - there is only one tile there! Click it to open the app.

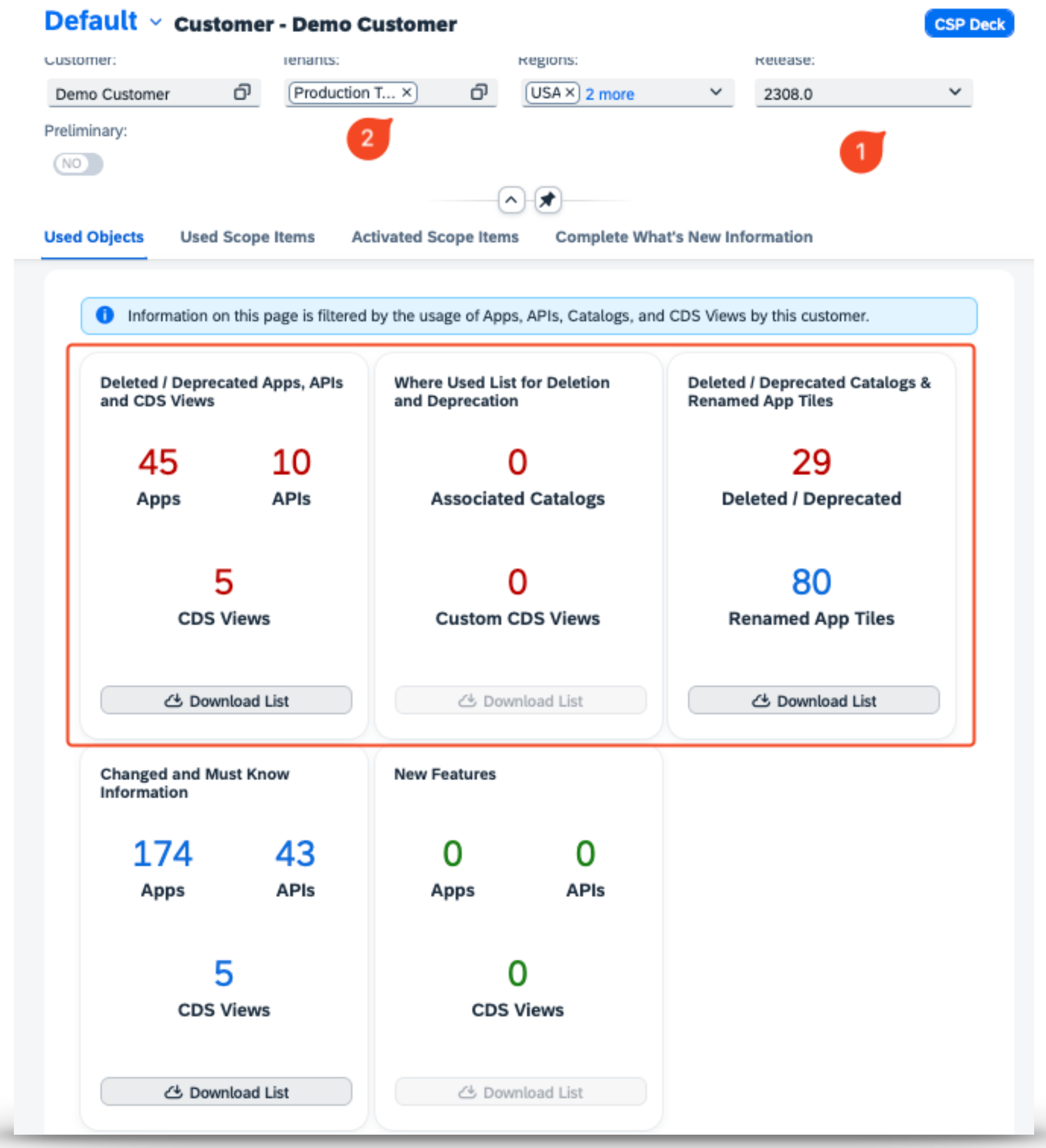


Once in the app, you will find a certain number of tabs and cards, but in the context of deprecations, we are really only interested in those enclosed by the red rectangle in the picture. What sets them apart, is the information they contain, which is indicated at the top of each card.

For each object type (Apps, Catalogs, etc…) contained within a card you can see how many objects are affected by deprecations. Remember also, that the information displayed here is based on your usage, so the importance of it cannot be stressed enough – this affects YOU, and YOU need to do something.

Of importance also here are the filters at the top of the screen.

1. Just like in the What's New viewer filters the release is important, because deprecations only exist during a major release (not intermediate updates)
2. The tenant type could also be important, depending on where you are in your implementation journey. For example if you are live, you absolutely want to make sure that your production tenant is selected, but you might also wish to select your other tenant types if you are in project mode and implementing functionality that is not yet live (I.e there is no point continuing to work on something that is deprecated)



Default ⌄ Customer - Demo Customer

Customer: Demo Customer

Tenants: Production T... ×

Regions: USA × 2 more

Release: 2308.0

Preliminary: NO

Information on this page is filtered by the usage of Apps, APIs, Catalogs, and CDS Views by this customer.

Deleted / Deprecated Apps, APIs and CDS Views
45 Apps
10 APIs
5 CDS Views

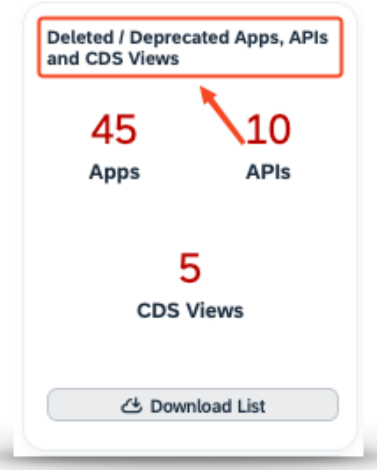
Where Used List for Deletion and Deprecation
0 Associated Catalogs
0 Custom CDS Views

Deleted / Deprecated Catalogs & Renamed App Tiles
29 Deleted / Deprecated
80 Renamed App Tiles

Changed and Must Know Information
174 Apps
43 APIs
5 CDS Views

New Features
0 Apps
0 APIs
0 CDS Views

To further illustrate the use of RASD in the context of deprecations, we will assume that we are interested in finding out, which CDS views are affected by deprecations, so we will click on the title of the respective card, as below.



Deleted / Deprecated Apps, APIs and CDS Views

45 Apps

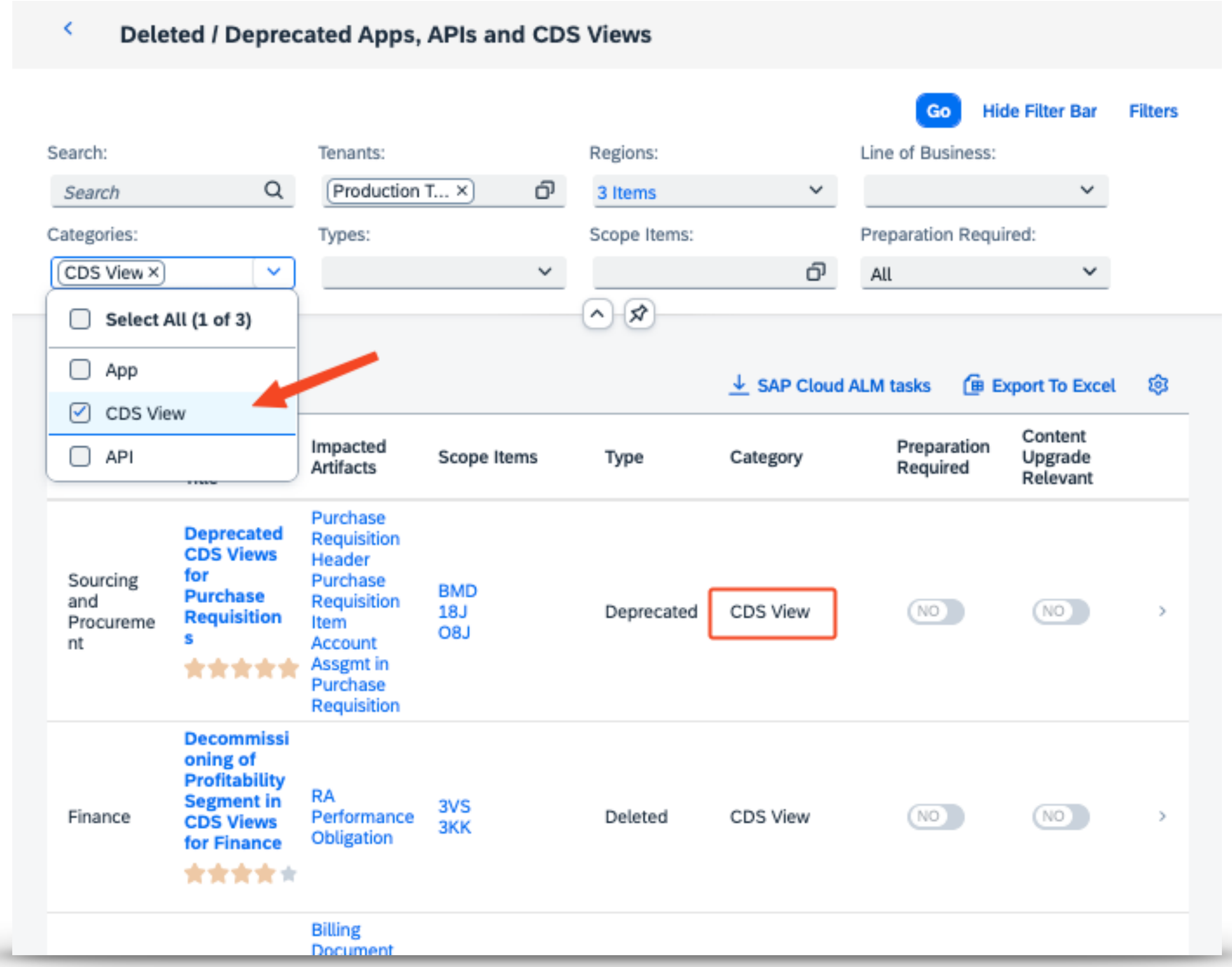
10 APIs

5 CDS Views

Download List

Because we only want to view deprecations related to CDS Views, we can use the Categories filter, to restrict the output to that object.

For each line that will be output, you can leverage additional hyperlinks to get more detailed insights on this deprecation.



Deleted / Deprecated Apps, APIs and CDS Views

Go | Hide Filter Bar | Filters

Search: Search

Tenants: Production T... ×

Regions: 3 Items

Line of Business:

Categories: CDS View ×

Types:

Scope Items:

Preparation Required: All

□ Select All (1 of 3)

□ App

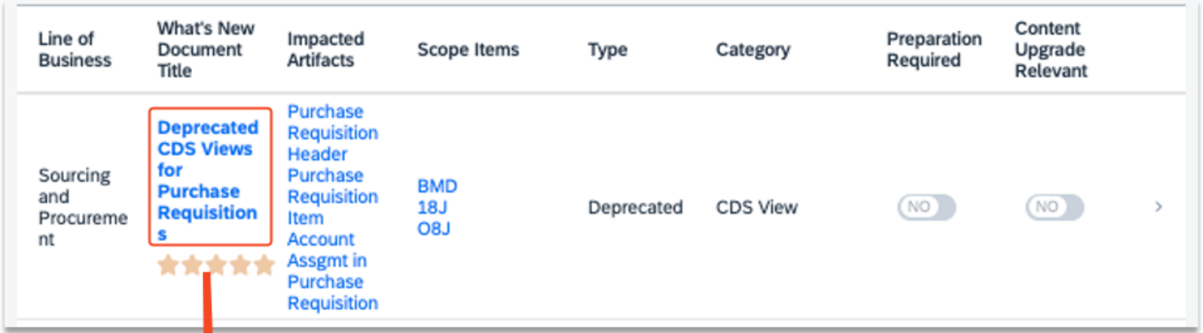
☑ CDS View

□ API

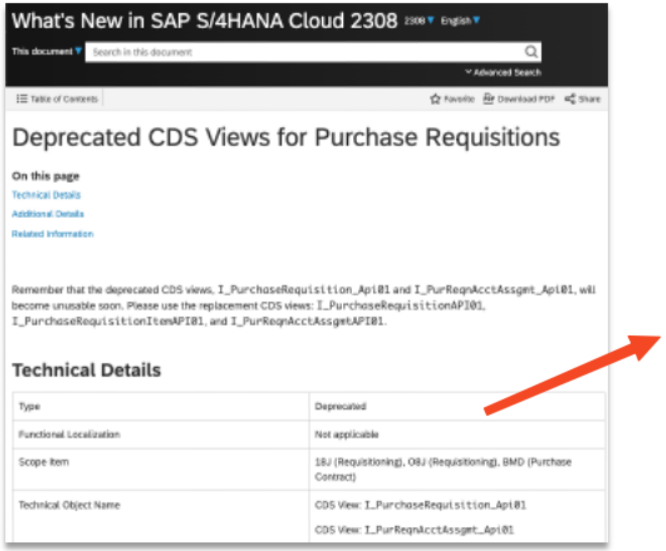
SAP Cloud ALM tasks | Export To Excel

		Impacted Artifacts	Scope Items	Type	Category	Preparation Required	Content Upgrade Relevant
Sourcing and Procurement	Deprecated CDS Views for Purchase Requisitions ★★★★★	Purchase Requisition Header Purchase Requisition Item Account Assgmt in Purchase Requisition	BMD 18J O8J	Deprecated	CDS View	NO	NO
Finance	Decommissioning of Profitability Segment in CDS Views for Finance ★★★★☆	RA Performance Obligation	3VS 3KK	Deleted	CDS View	NO	NO
		Billing Document					

You can navigate to the What's New viewer, which as previously will take you to the specific what's new viewer section, where you can get more detailed insights into the technical names of the deprecated objects and importantly also their successors. As you can see from the screenshot below, we can see that one deprecated CDS view has two successors. i.e There is not always a 1:1 relationship between a deprecated object and its successor(s)!



Line of Business	What's New Document Title	Impacted Artifacts	Scope Items	Type	Category	Preparation Required	Content Upgrade Relevant	
Sourcing and Procurement	Deprecated CDS Views for Purchase Requisitions	Purchase Requisition Header Purchase Requisition Item Account Assgmt in Purchase Requisition	BMD 18J O8J	Deprecated	CDS View	NO	NO	›



What's New in SAP S/4HANA Cloud 2308

Deprecated CDS Views for Purchase Requisitions

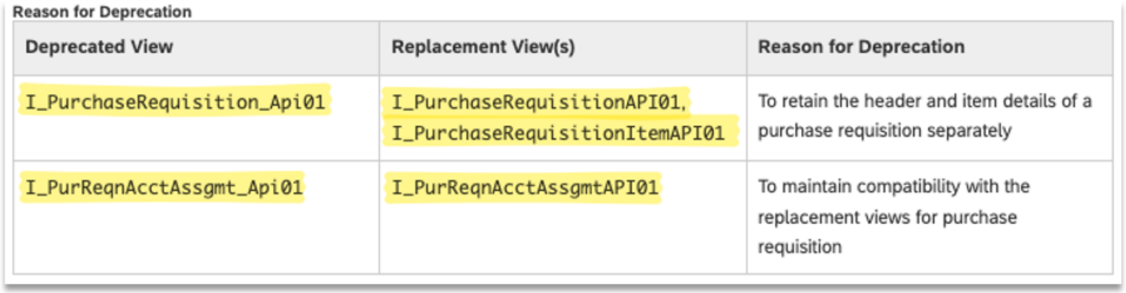
On this page

- Technical Details
- Additional Details
- Related Information

Remember that the deprecated CDS views, I_PurchaseRequisition_Api01 and I_PurReqnAcctAssgmt_Api01, will become unusable soon. Please use the replacement CDS views: I_PurchaseRequisitionAPI01, I_PurchaseRequisitionItemAPI01, and I_PurReqnAcctAssgmtAPI01.

Technical Details

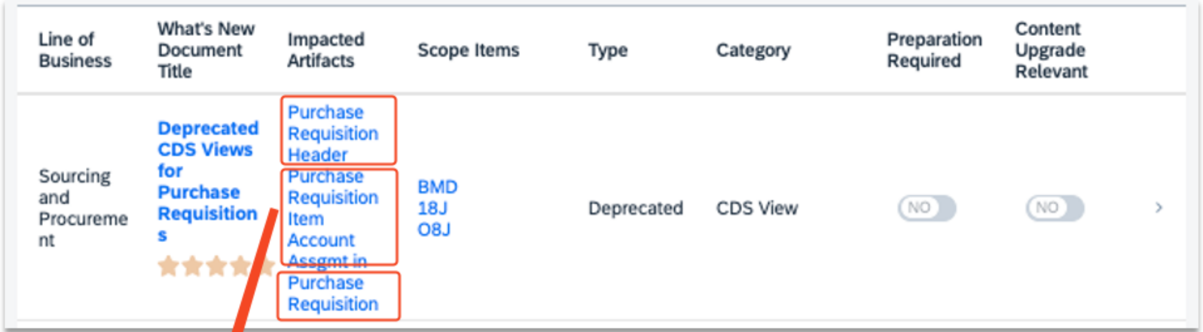
Type	Deprecated
Functional Localization	Not applicable
Scope Item	18J (Requisitioning), O8J (Requisitioning), BMD (Purchase Contract)
Technical Object Name	CDS View: I_PurchaseRequisition_Api01 CDS View: I_PurReqnAcctAssgmt_Api01



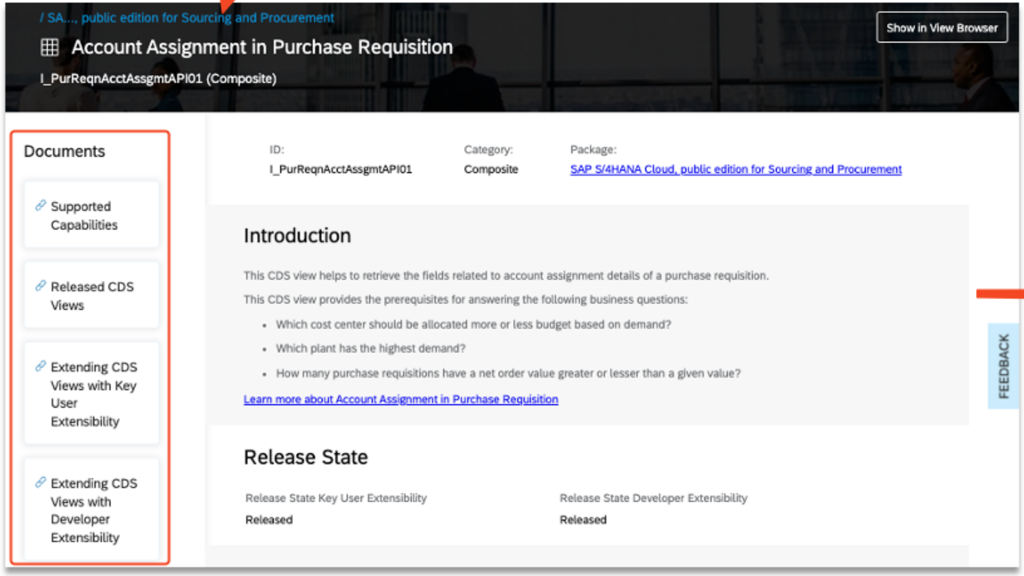
Reason for Deprecation

Deprecated View	Replacement View(s)	Reason for Deprecation
I_PurchaseRequisition_Api01	I_PurchaseRequisitionAPI01, I_PurchaseRequisitionItemAPI01	To retain the header and item details of a purchase requisition separately
I_PurReqnAcctAssgmt_Api01	I_PurReqnAcctAssgmtAPI01	To maintain compatibility with the replacement views for purchase requisition

You can also navigate to the Business Accelerator Hub, (fka the API hub) to the specific Artefact to get a technical view of it, that is the successor. I.e understand the supported capabilities (can it be used for data extraction, can it be a source for defining CDS entities, etc…), the extensibility uses (key user and/or developer), but also the list of and technical aspects of the fields that make up this CDS.



Line of Business	What's New Document Title	Impacted Artifacts	Scope Items	Type	Category	Preparation Required	Content Upgrade Relevant
Sourcing and Procurement	Deprecated CDS Views for Purchase Requisitions ★★★★★	Purchase Requisition Header Purchase Requisition Item Account Assgmt in Purchase Requisition	BMD 18J O8J	Deprecated	CDS View	NO	NO



/ SA..., public edition for Sourcing and Procurement

Show in View Browser

Account Assignment in Purchase Requisition

I_PurReqnAcctAssgmtAPI01 (Composite)

Documents

- Supported Capabilities
- Released CDS Views
- Extending CDS Views with Key User Extensibility
- Extending CDS Views with Developer Extensibility

ID:	Category:	Package:
I_PurReqnAcctAssgmtAPI01	Composite	SAP S/4HANA Cloud, public edition for Sourcing and Procurement

Introduction

This CDS view helps to retrieve the fields related to account assignment details of a purchase requisition.

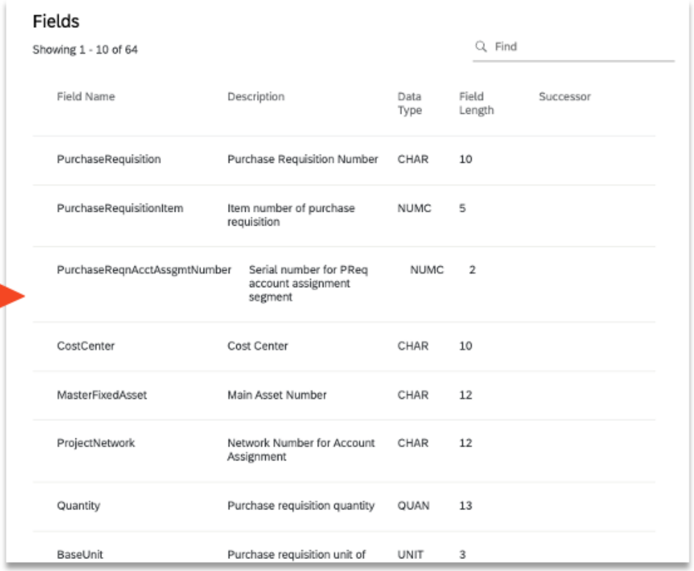
This CDS view provides the prerequisites for answering the following business questions:

- Which cost center should be allocated more or less budget based on demand?
- Which plant has the highest demand?
- How many purchase requisitions have a net order value greater or lesser than a given value?

Learn more about Account Assignment in Purchase Requisition

Release State

Release State Key User Extensibility	Release State Developer Extensibility
Released	Released



Fields

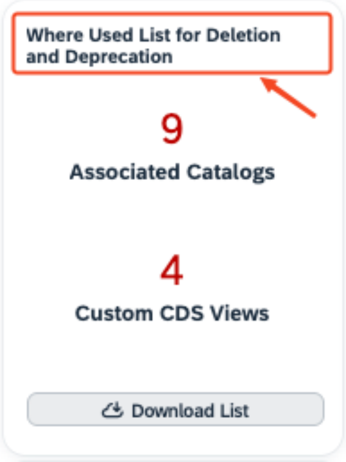
Showing 1 - 10 of 64

Field Name	Description	Data Type	Field Length	Successor
PurchaseRequisition	Purchase Requisition Number	CHAR	10	
PurchaseRequisitionItem	Item number of purchase requisition	NUMC	5	
PurchaseReqnAcctAssgmtNumber	Serial number for PReq account assignment segment	NUMC	2	
CostCenter	Cost Center	CHAR	10	
MasterFixedAsset	Main Asset Number	CHAR	12	
ProjectNetwork	Network Number for Account Assignment	CHAR	12	
Quantity	Purchase requisition quantity	QUAN	13	
BaseUnit	Purchase requisition unit of	UNIT	3	

Lastly, and in particular for CDS views, the RASD tool also provides us with a 'where-used' information tile. This allows us to identify exactly which of the custom CDS objects that we have created in our landscape, that are impacted (I.e require adaption) by a deprecation.

This view allows you to quickly:

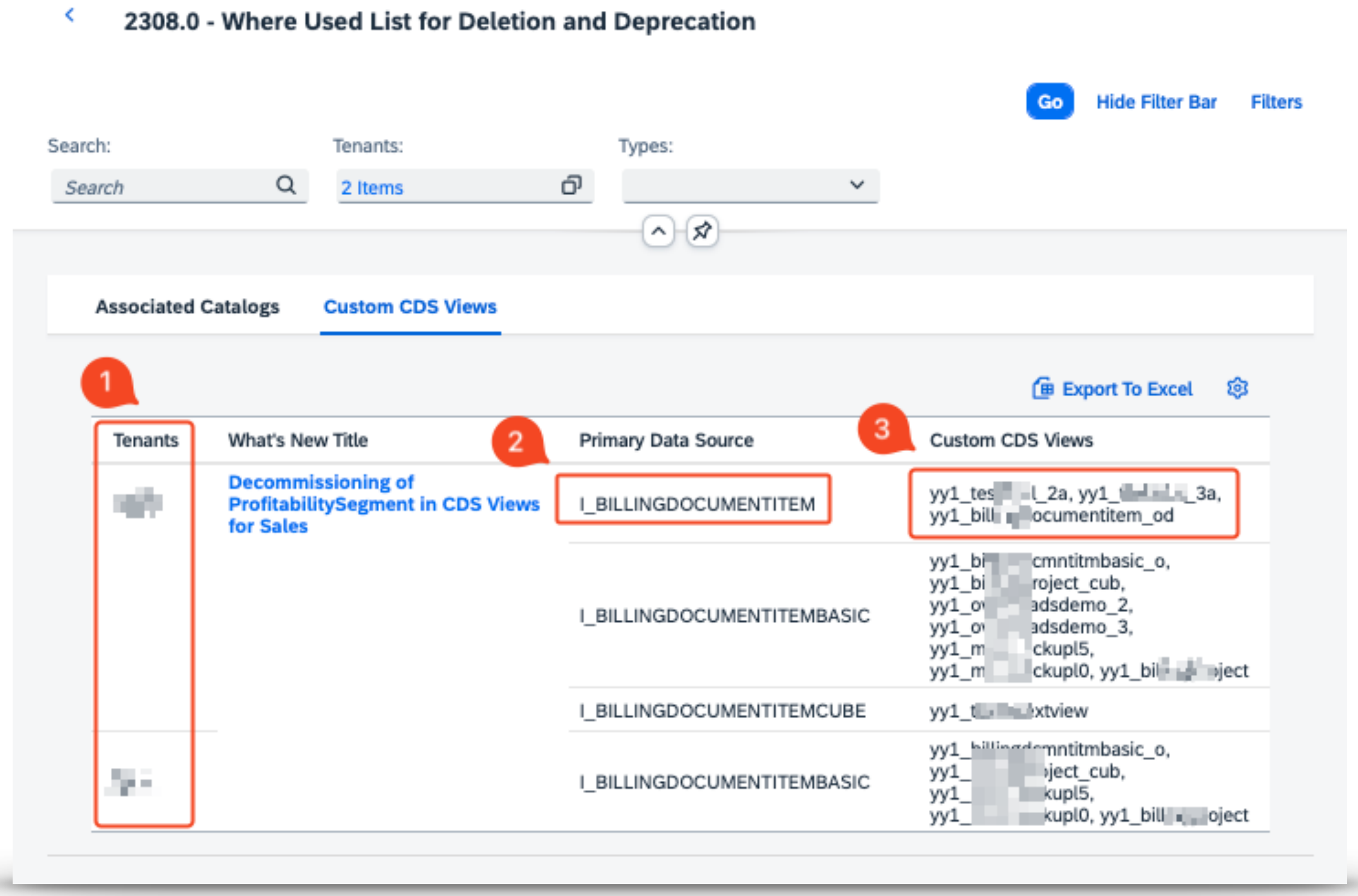
1. Understand which system (tenants) is impacted by a CDS deprecation
2. The SAP standard CDS that you are using, that is impacted by a deprecation
3. The custom CDS view that you have created, that requires adaption(prefixed by yy1_*)



Where Used List for Deletion and Deprecation

9
Associated Catalogs

4
Custom CDS Views



2308.0 - Where Used List for Deletion and Deprecation

Search: Search

Tenants: 2 Items

Types:

Tenants	What's New Title	Primary Data Source	Custom CDS Views
[redacted]	Decommissioning of ProfitabilitySegment in CDS Views for Sales	I_BILLINGDOCUMENTITEM	yy1_tes[redacted]l_2a, yy1_[redacted]3a, yy1_bill[redacted]ocumentitem_od
		I_BILLINGDOCUMENTITEMBASIC	yy1_bi[redacted]cmntitmbasic_o, yy1_bi[redacted]roject_cub, yy1_o[redacted]adsdemo_2, yy1_o[redacted]adsdemo_3, yy1_m[redacted]ckupl5, yy1_m[redacted]ckupl0, yy1_bil[redacted]oject
		I_BILLINGDOCUMENTITEMCUBE	yy1_t[redacted]xtview
[redacted]		I_BILLINGDOCUMENTITEMBASIC	yy1_[redacted]mntitmbasic_o, yy1_[redacted]ject_cub, yy1_[redacted]kupl5, yy1_[redacted]kupl0, yy1_bill[redacted]oject

Now that we have covered some of the data sources that are available to you outside your SAP S/4HANA Cloud system, in the next section we will look at the information that is available inside your system.

In your system there will be some information that is generic (irrespective of whether you use it, for example warnings or callouts that an object is deprecated, so that you do not start to use it!), and some that will be specific and relevant, *because* you do make use of it. In this next section, we will look at applications that are available in your SAP S/4HANA Cloud system to either help you investigate deprecation related changes or to clearly advise you that deprecation related rework tasks exist in your system and provide you, via these application, the functionality to process them. This information is not meant to replace the comprehensive information that is already available elsewhere, but merely to make you aware of them, and point you in the direction to find out more on the subject.

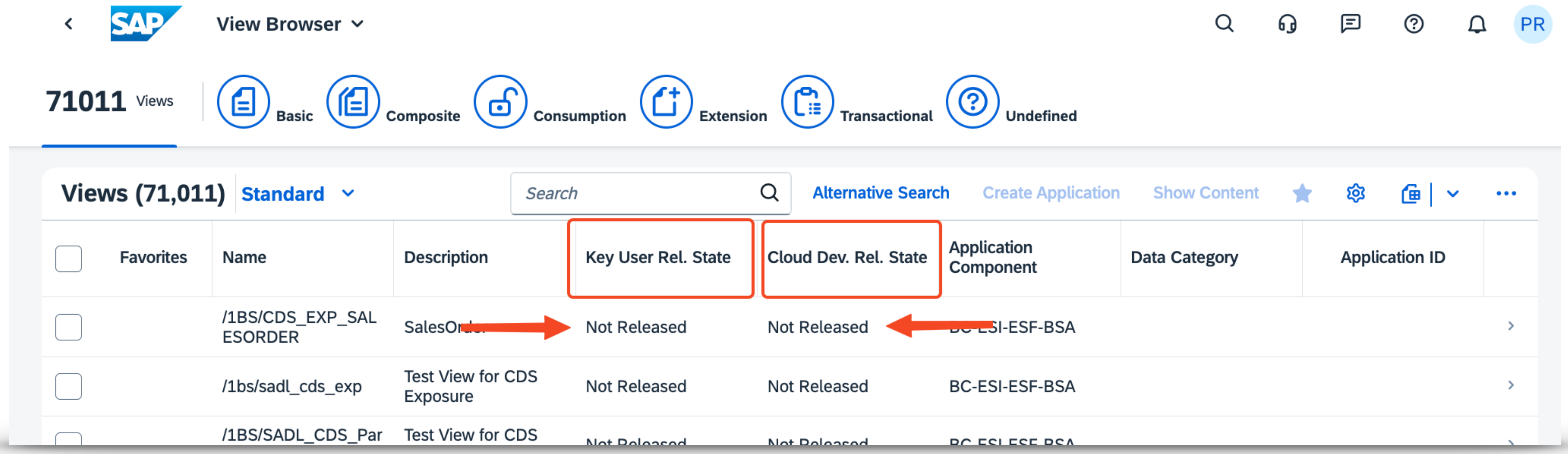
Inside SAP S/4HANA Cloud

The View Browser application

The View Browser app is an app that will show you all the CDSs (Core Data Services) that exist in your system (which does not mean that they are all available for use - some have a status not released), irrespective of whether you use them or not, or indeed irrespective of whether you can actually use them or not. However, this application is extremely handy for you to investigate and identify technically the data sources (SAP Standard as well as custom) that will be available to you when you need a data source for your next extensibility needs. Of course what you do not want, is to base your investigations or worse, build content using a deprecated CDS. This may not be evident, but the view browser app, allows you to filter those CDSs that are deprecated.

In order to access the View Browser app, you will need to have the catalog `SAP_CA_BC_ANA_AQD_PC` (Analytics - Query Design) assigned to a business role, assigned to your business user.

Depending on the extensibility interest that you have, whether Key User and/or Cloud Development, you will be wanting to exclude the data sources that are deprecated from your investigation, because again, the use of deprecated objects should be discouraged. The release state (Rel. State) of a view will be visible in the columns 'Key User Release State' and 'Cloud Development Release State' as shown in the diagram.



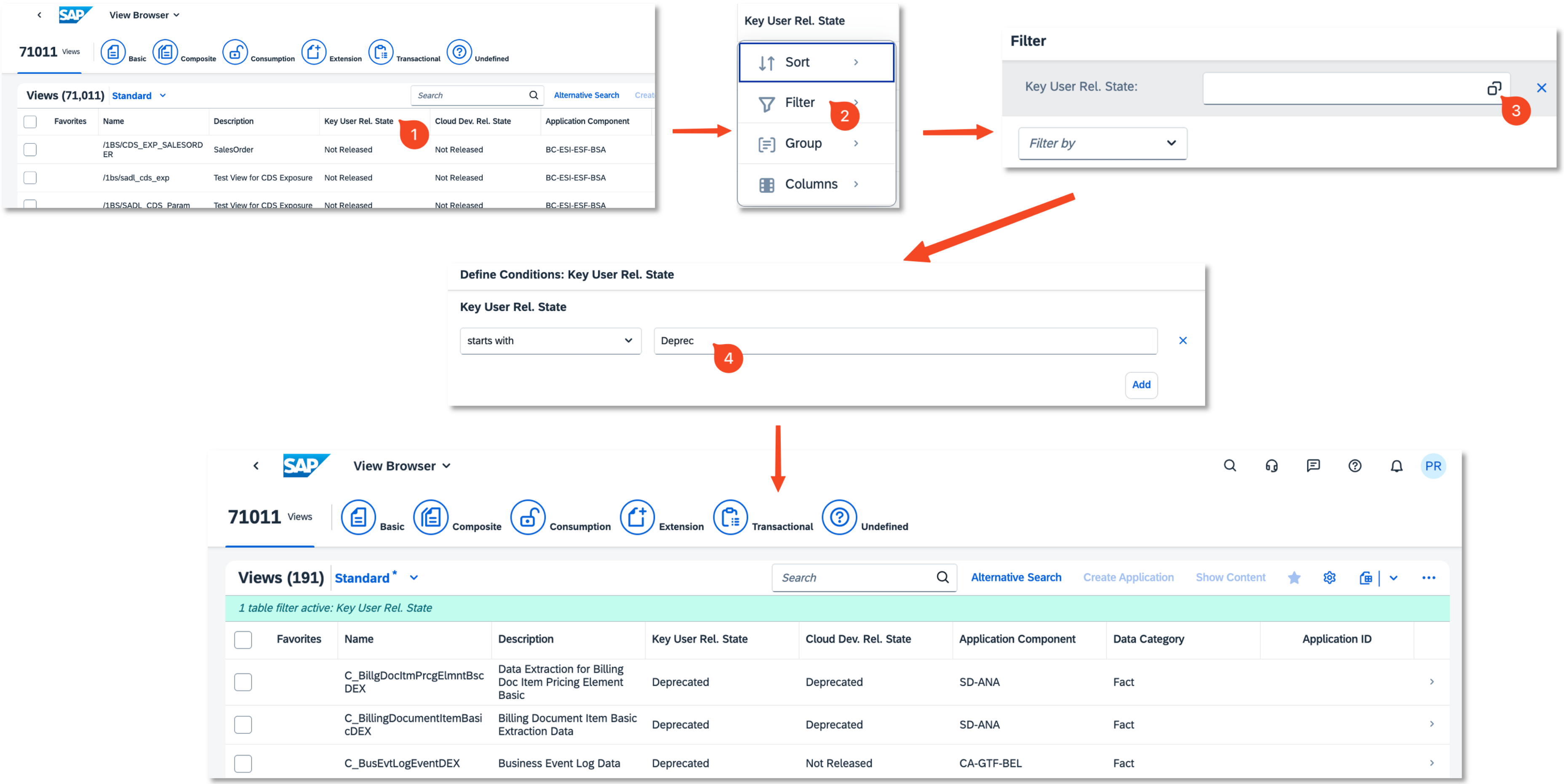
□	Favorites	Name	Description	Key User Rel. State	Cloud Dev. Rel. State	Application Component	Data Category	Application ID
□		/1BS/CDS_EXP_SALESORDER	SalesOr	Not Released	Not Released	BC-ESI-ESF-BSA		
□		/1bs/sadl_cds_exp	Test View for CDS Exposure	Not Released	Not Released	BC-ESI-ESF-BSA		
□		/1BS/SADL_CDS_Par	Test View for CDS	Not Released	Not Released	BC-ESI-ESF-BSA		

In order to filter those objects that are deprecated, then:

1. Click on the Column Title that you are interest to filter
2. Select the Filter Option
3. Call up the Define condition window
4. Choose ‘starts with’ and enter ‘*Deprec*’ (you could of course also exclude them by choosing the option ‘Does not start with’)

Then click on OK, and this will reveal only Deprecated CDS.

Similarly, you could use this method to filter those CDSs that are Released only.



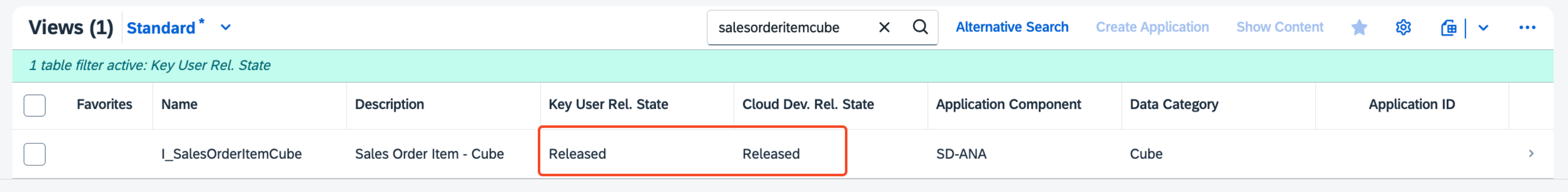
	Favorites	Name	Description	Key User Rel. State	Cloud Dev. Rel. State	Application Component
□		/1BS/CDS_EXP_SALESORDER	SalesOrder	Not Released	Not Released	BC-ESI-ESF-BSA
□		/1bs/sadl_cds_exp	Test View for CDS Exposure	Not Released	Not Released	BC-ESI-ESF-BSA
□		/1BS/SADL_CDS_Param	Test View for CDS Exposure	Not Released	Not Released	BC-ESI-ESF-BSA

starts with: Deprec

1 table filter active: Key User Rel. State

□	Favorites	Name	Description	Key User Rel. State	Cloud Dev. Rel. State	Application Component	Data Category	Application ID
□		C_BillgDocItmPrcgElmntBscDEX	Data Extraction for Billing Doc Item Pricing Element Basic	Deprecated	Deprecated	SD-ANA	Fact	
□		C_BillingDocumentItemBasicDEX	Billing Document Item Basic Extraction Data	Deprecated	Deprecated	SD-ANA	Fact	
□		C_BusEvtLogEventDEX	Business Event Log Data	Deprecated	Not Released	CA-GTF-BEL	Fact	

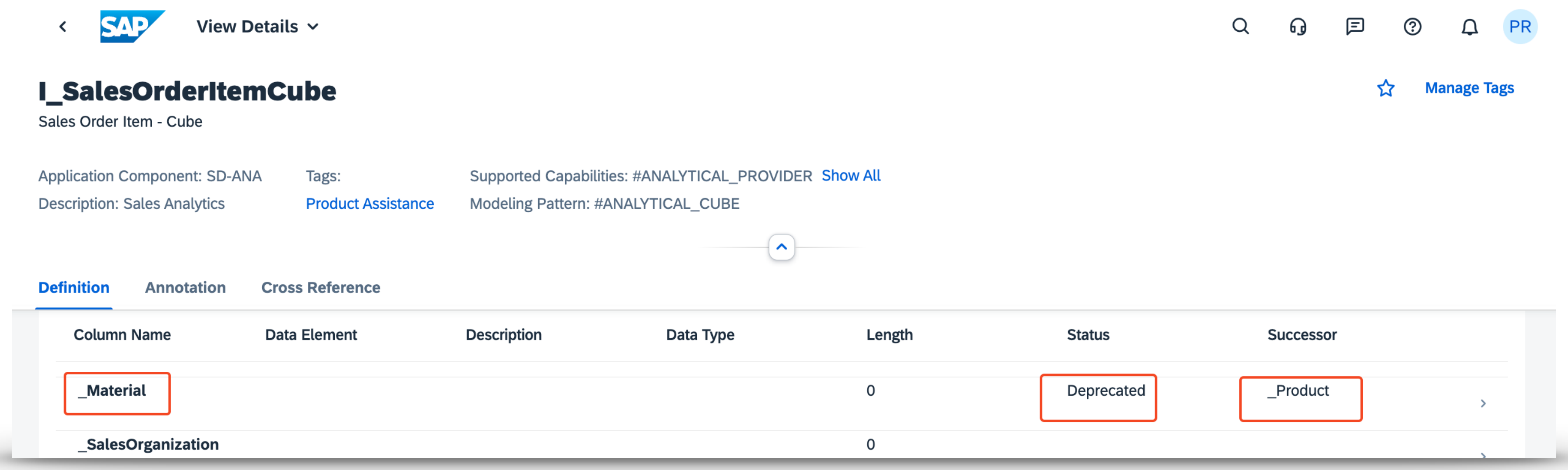
This might be a useful method for you to identify if a CDS entity is completely deprecated. But there are of course cases where it is only element(s) of the CDS entity that is deprecated. In order to access that level of detail, you need to navigate to the detail screen of the CDS in question. For example, let's consider the CDS below `I_SalesOrderItemCube`. For all intents and purposes, we can see that it is released for extensibility scenarios.



1 table filter active: Key User Rel. State

	Favorites	Name	Description	Key User Rel. State	Cloud Dev. Rel. State	Application Component	Data Category	Application ID
□		I_SalesOrderItemCube	Sales Order Item - Cube	Released	Released	SD-ANA	Cube	

However, as we delve into the detail view of this CDS, we can see that some fields are flagged as deprecated (Status). But here also you are getting the information pertaining to the successor field. The use of the successor field must be privileged for new developments.



I_SalesOrderItemCube

Sales Order Item - Cube

Application Component: SD-ANA
Description: Sales Analytics

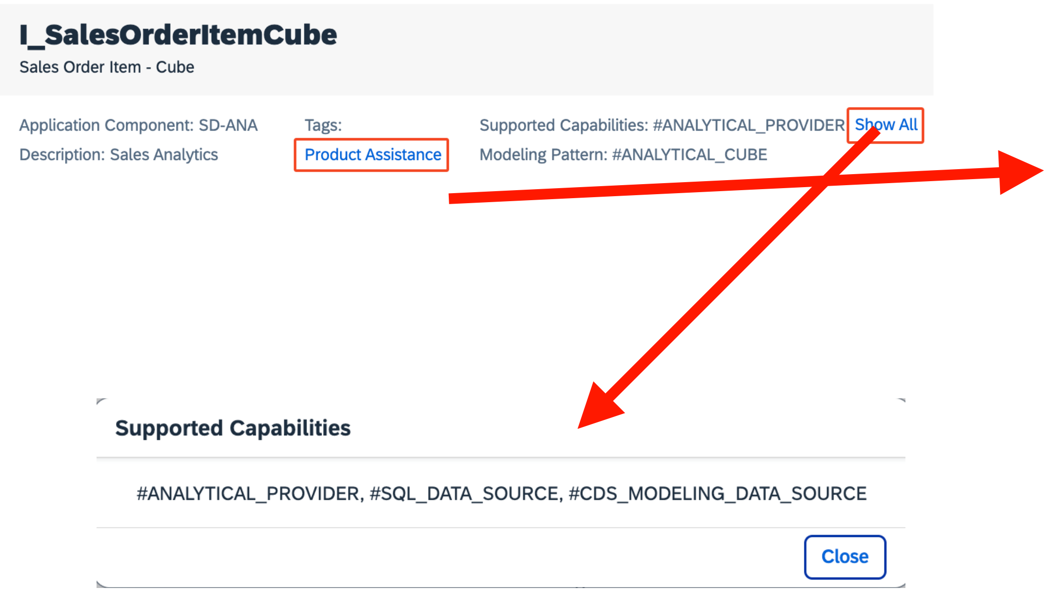
Tags:
Product Assistance

Supported Capabilities: #ANALYTICAL_PROVIDER
Modeling Pattern: #ANALYTICAL_CUBE

Column Name	Data Element	Description	Data Type	Length	Status	Successor
_Material				0	Deprecated	_Product
_SalesOrganization				0		

Coincidentally, whilst in the detail view of a CDS, you will find links or access to more, additional noteworthy information. You can access the SAP help of the given CDS with lots of additional details, you can also view all the supported capabilities of the CDS. This is quite helpful, when processing a CDS entity deprecation, to check that the successor can still be used for the same purpose (e.g: Data Extraction) as the deprecated CDS entity.

If you are unsure of the meaning of the codes (the technical names) shown below for the supported capabilities of a CDS, or indeed what those supported capabilities can be, then please check this information here Supported Capabilities for CDS Views.



I_SalesOrderItemCube

Sales Order Item - Cube

Application Component: SD-ANA

Description: Sales Analytics

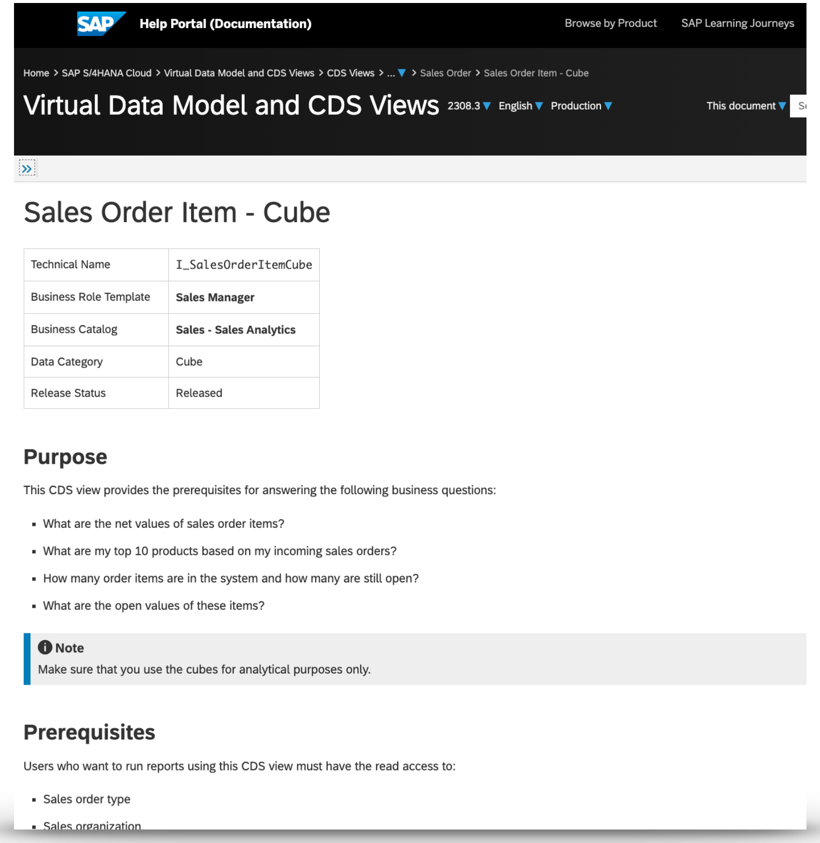
Tags: Product Assistance

Supported Capabilities: #ANALYTICAL_PROVIDER Show All

Modeling Pattern: #ANALYTICAL_CUBE

Supported Capabilities

#ANALYTICAL_PROVIDER, #SQL_DATA_SOURCE, #CDS_MODELING_DATA_SOURCE



SAP
Help Portal (Documentation)
Browse by Product
SAP Learning Journeys
Home > SAP S/4HANA Cloud > Virtual Data Model and CDS Views > CDS Views > ... > Sales Order > Sales Order Item - Cube
2308.3
English
Production
This document

Virtual Data Model and CDS Views

Sales Order Item - Cube

Technical Name	I_SalesOrderItemCube
Business Role Template	**Sales Manager**
Business Catalog	**Sales - Sales Analytics**
Data Category	Cube
Release Status	Released

Purpose

This CDS view provides the prerequisites for answering the following business questions:

- What are the net values of sales order items?
- What are my top 10 products based on my incoming sales orders?
- How many order items are in the system and how many are still open?
- What are the open values of these items?

Note

Make sure that you use the cubes for analytical purposes only.

Prerequisites

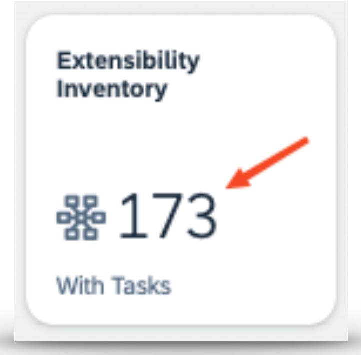
Users who want to run reports using this CDS view must have the read access to:

- Sales order type
- Sales organization

The Extensibility Inventory application

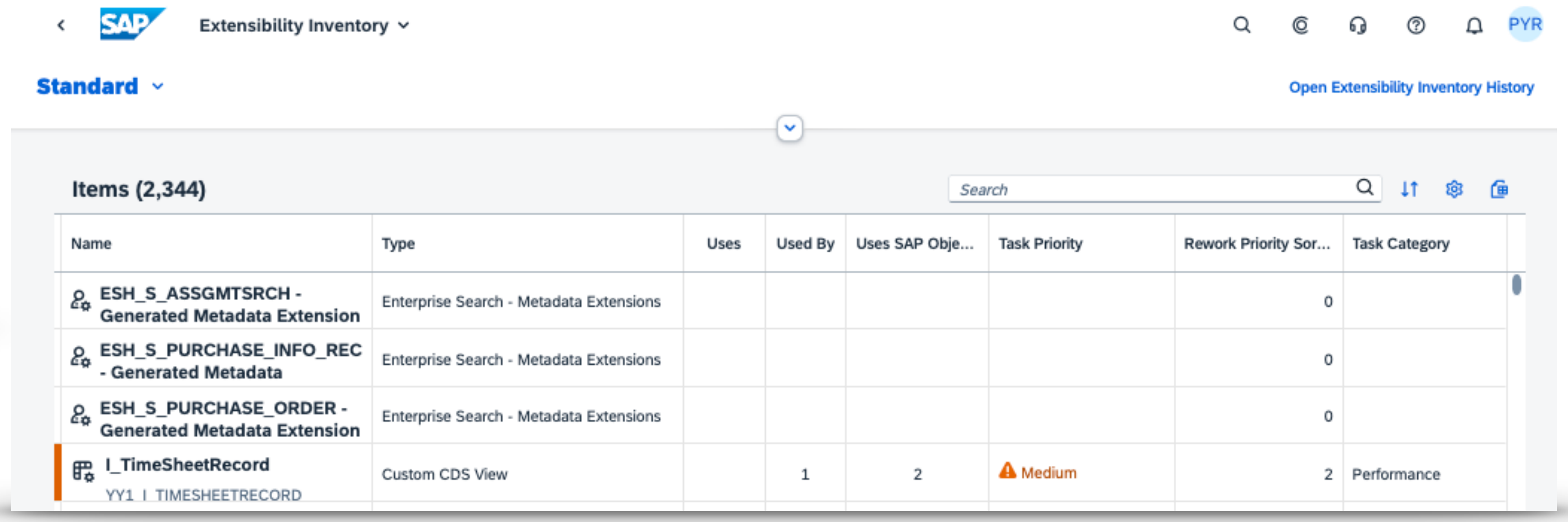
The Extensibility Inventory app is an app that will, as the name indicates, display for you an exhaustive list of the extensibility objects that you have developed in your system (irrespective of whether a deprecation affects them or not), or included in a software collection. This app has an informational use, in that it will provide for you, in one place, a bird's eye view of all your extensibility objects in great detail, but it similarly also has an instructional use in that it advertises the priority (aka criticality) and type of tasks that you need to perform in order to resolve or attend to a particular situation in your system. Already from the Fiori Launchpad, you will on the tile of the app, have the number of outstanding tasks clearly shown – but not all will necessarily be deprecations related rework tasks .

Once you click on the tile, and unless you have set a specific default display variant, a list screen similar to this one will be presented to you .


Extensibility Inventory

173

With Tasks

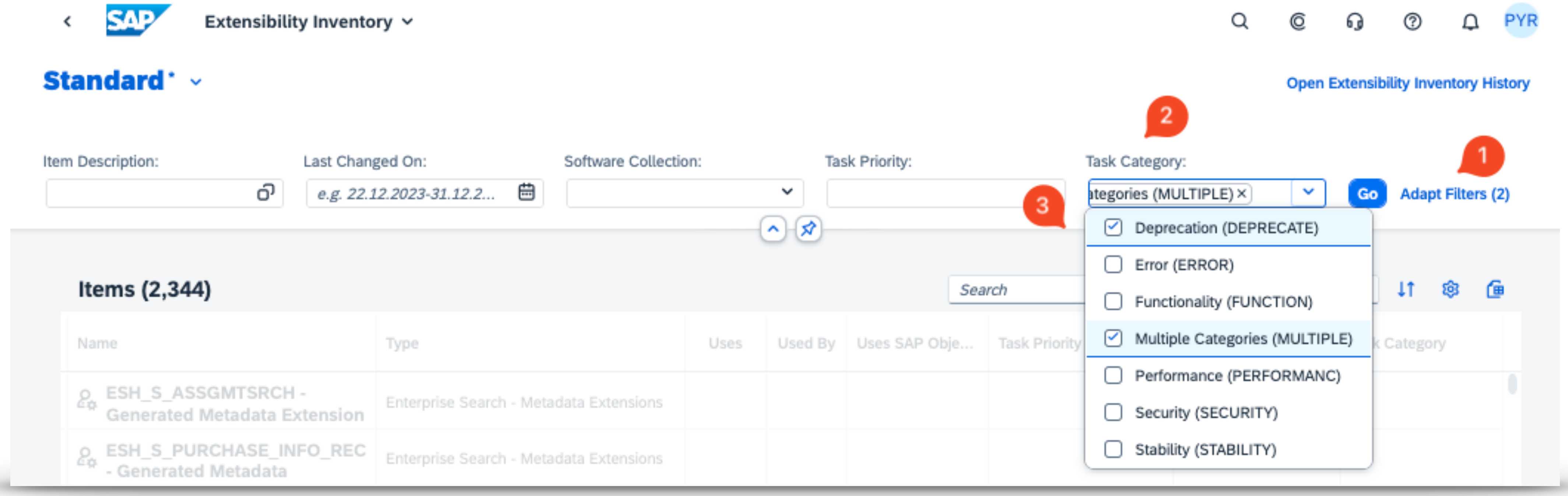


Items (2,344)

Name	Type	Uses	Used By	Uses SAP Obje...	Task Priority	Rework Priority Sor...	Task Category
ESH_S_ASSGMTSRCH - Generated Metadata Extension	Enterprise Search - Metadata Extensions					0	
ESH_S_PURCHASE_INFO_REC - Generated Metadata	Enterprise Search - Metadata Extensions					0	
ESH_S_PURCHASE_ORDER - Generated Metadata Extension	Enterprise Search - Metadata Extensions					0	
I_TimeSheetRecord YY1_I_TIMESHEETRECORD	Custom CDS View		1	2	⚠ Medium	2	Performance

The first thing that we want to do, is to reduce the list presented to just those items that interest us, namely the items that are the object of a deprecation related rework task. To do so:

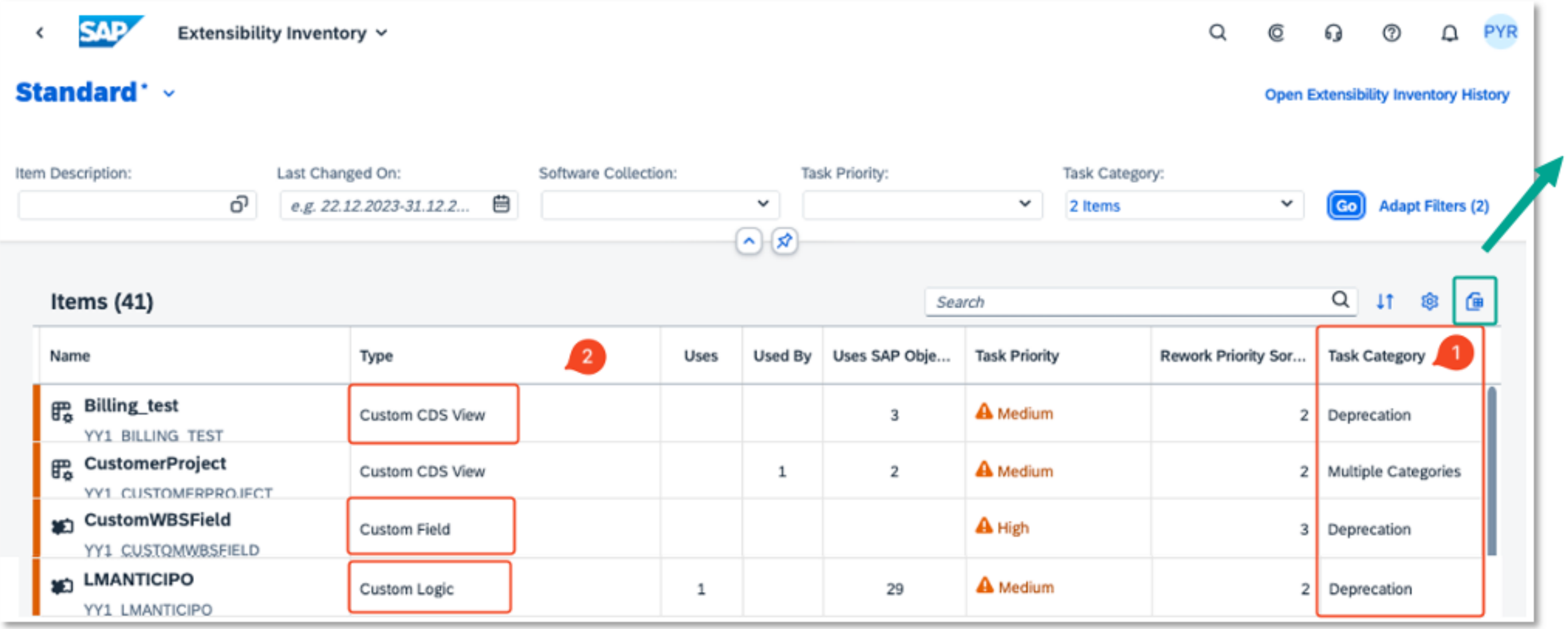
1. Adapt the filters if necessary to show the Task Category filter,
2. Adapt the values for the Task Category filter,
3. Select the Deprecation category, and select the Multiple Categories as well, in case it includes deprecations.


Extensibility Inventory
PYR
Standard*
Open Extensibility Inventory History
2
1
3
Item Description:
Last Changed On:
e.g. 22.12.2023-31.12.2...
Software Collection:
Task Priority:
Go
Adapt Filters (2)
Items (2,344)
Search
Name
Type
Uses
Used By
Uses SAP Obje...
Task Priority
k Category
ESH_S_ASSGMTSRCH - Generated Metadata Extension
Enterprise Search - Metadata Extensions
ESH_S_PURCHASE_INFO_REC - Generated Metadata
Enterprise Search - Metadata Extensions

Task Category: ategories (MULTIPLE) ×

- ☑ Deprecation (DEPRECATE)
- ☐ Error (ERROR)
- ☐ Functionality (FUNCTION)
- ☑ Multiple Categories (MULTIPLE)
- ☐ Performance (PERFORMANC)
- ☐ Security (SECURITY)
- ☐ Stability (STABILITY)

This will then yield a list focussed on deprecations (1) . Already by looking at the ‘Type’ column, we see we have a variety of objects (2) that are affected by deprecations. You can further tweak the list to your liking by applying sorts or filters, and you can also export this list in spreadsheet format. This could be very useful for example, if you are going to incorporate some of this information in an upcoming project plan or do some offline planning.



Extensibility Inventory

Standard*

Open Extensibility Inventory History

Item Description:

Last Changed On: e.g. 22.12.2023-31.12.2...

Software Collection:

Task Priority:

Task Category: 2 Items

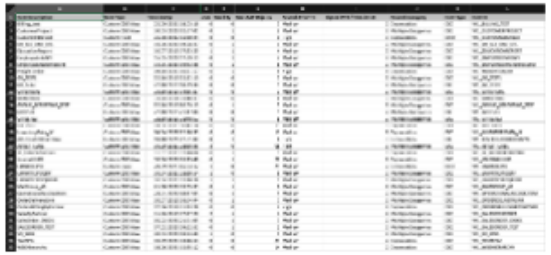
Go

Adapt Filters (2)

Items (41)

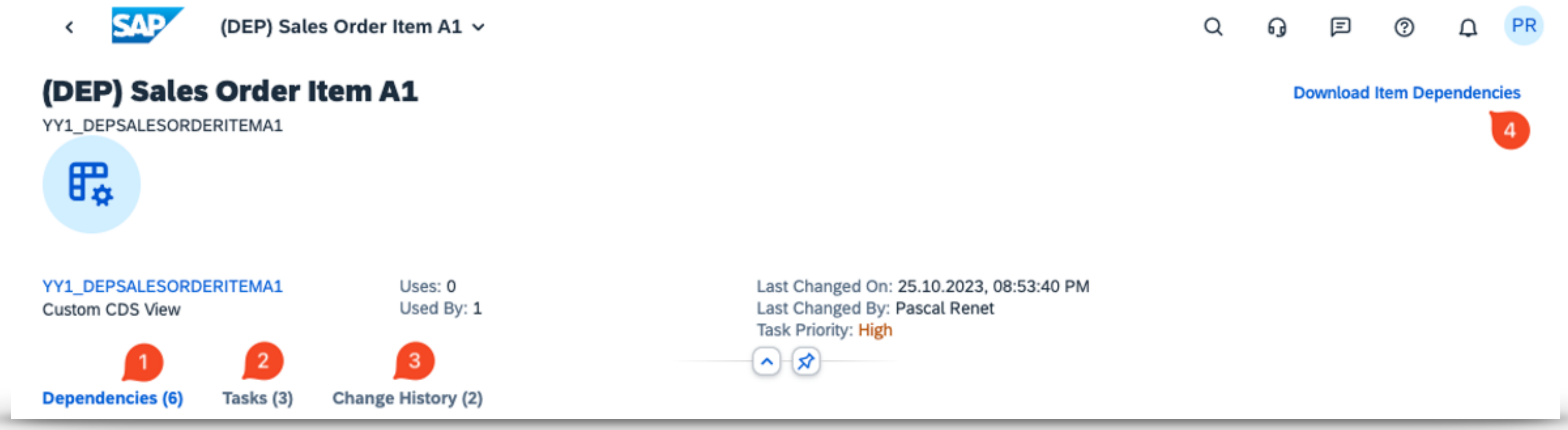
Search

Name	Type	Uses	Used By	Uses SAP Obje...	Task Priority	Rework Priority Sor...	Task Category
Billing_test YY1_BILLING_TEST	Custom CDS View			3	⚠ Medium	2	Deprecation
CustomerProject YY1_CUSTOMERPROJECT	Custom CDS View		1	2	⚠ Medium	2	Multiple Categories
CustomWBSField YY1_CUSTOMWBSFIELD	Custom Field				⚠ High	3	Deprecation
LMANTICIPO YY1_LMANTICIPO	Custom Logic	1		29	⚠ Medium	2	Deprecation



Once you have performed your sorts and filters, you can then click on each line to reach further details, spread across two or three sections depending on the object considered, named as shown below:

1. Dependencies
2. Tasks
3. Change History
4. Coincidentally, as we will see in a moment, you can also download this information in a spreadsheet ready format



(DEP) Sales Order Item A1

YY1_DEPSALESORDERITEMA1

YY1_DEPSALESORDERITEMA1
Custom CDS View

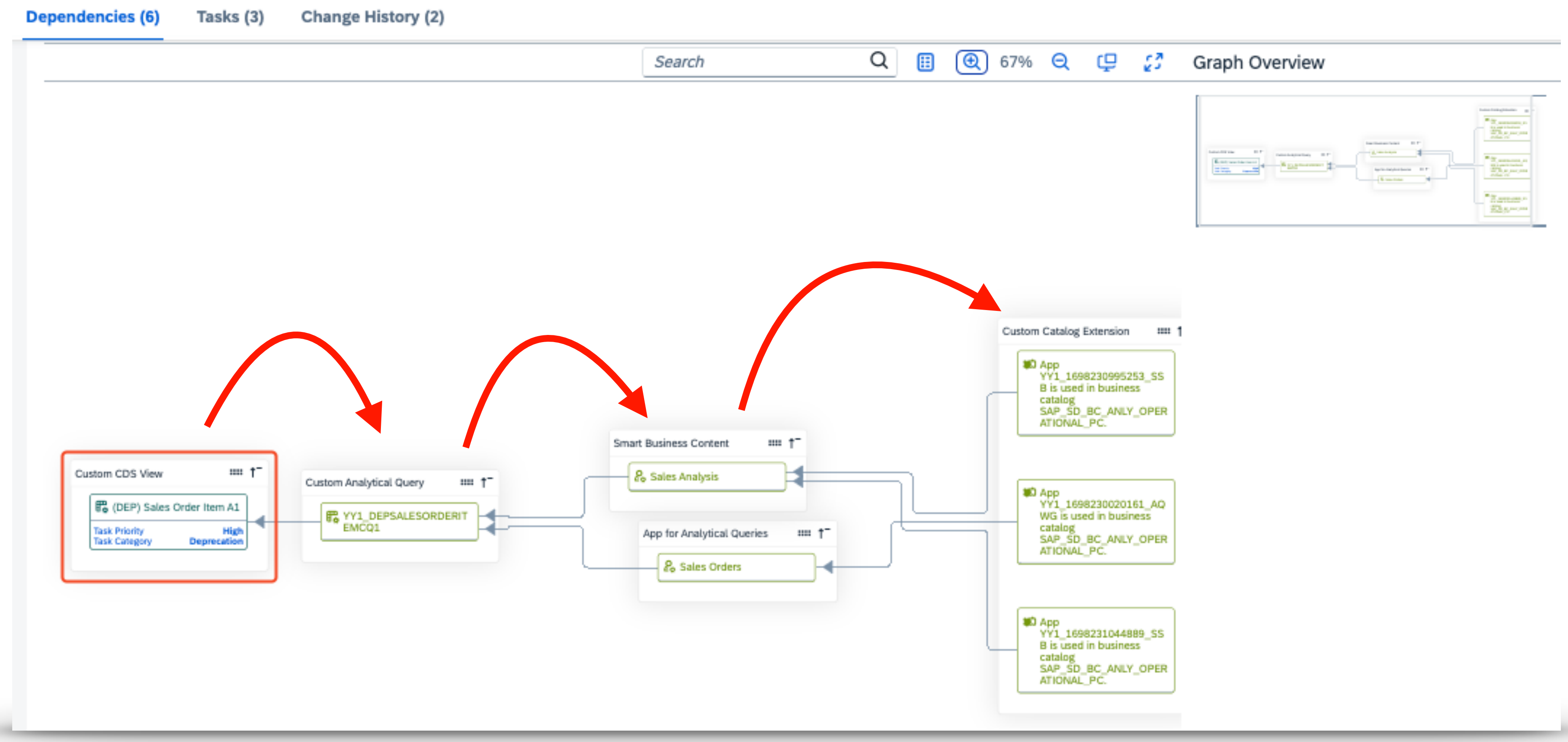
Uses: 0
Used By: 1

Last Changed On: 25.10.2023, 08:53:40 PM
Last Changed By: Pascal Renet
Task Priority: High

Let's look at this custom CDS that has been flagged as the object of a deprecation in more detail.

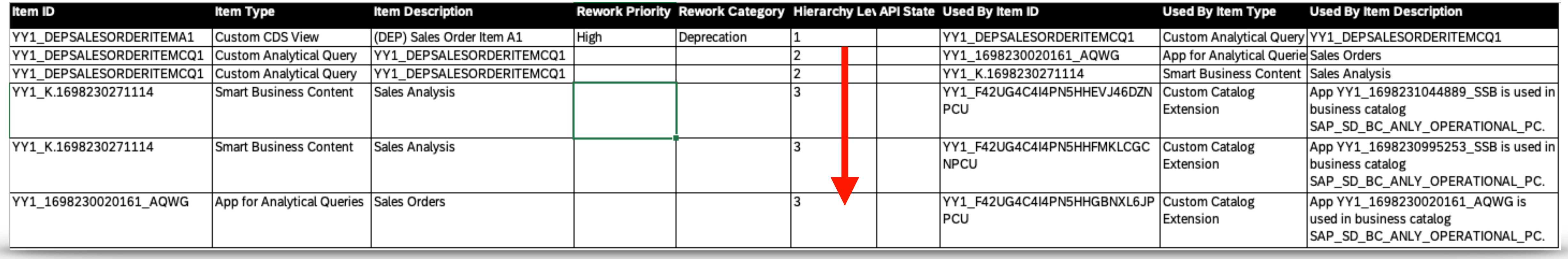
The Dependencies section

This is a rich graphical representation of the object being considered (here, our deprecation relevant custom CDS), with a clear representation of its lineage, i.e where it is used. In the example below we see that the custom CDS, is used in an Analytical Query, used in an app for Analytical Queries, used in a business catalog. This is quite powerful in visual representation to understand the impact of a change and where you will need to intervene to make sure that the switch from a deprecated to successor object still produces the desired end result.


Dependencies (6)
Tasks (3)
Change History (2)
Search
67%
Graph Overview
Custom CDS View
(DEP) Sales Order Item A1
Task Priority
High
Task Category
Deprecation
Custom Analytical Query
YY1_DEPSALESORDERITEMCQ1
Smart Business Content
Sales Analysis
App for Analytical Queries
Sales Orders
Custom Catalog Extension
App YY1_1698230995253_SSB is used in business catalog SAP_SD_BC_ANLY_OPERATIONAL_PC.
App YY1_1698230020161_AQWG is used in business catalog SAP_SD_BC_ANLY_OPERATIONAL_PC.
App YY1_1698231044889_SSB is used in business catalog SAP_SD_BC_ANLY_OPERATIONAL_PC.

In concert with the Dependencies section, you can also, as seen earlier, download these dependencies in a spreadsheet format. Selecting the Download option will download a zip file containing 2 csv files. A 'Used_by…' and a 'Depending_on…' file. The 'Used_by…' file will give you a tabular representation of the graphic shown in the dependencies section. Having the information in this format would be very helpful as you are planning your deprecations, maybe to analyse and group changes logically, maybe to assign responsible people to tasks, etc…

The hierarchy levels columns, provide you with that 'used-by' relationship information.



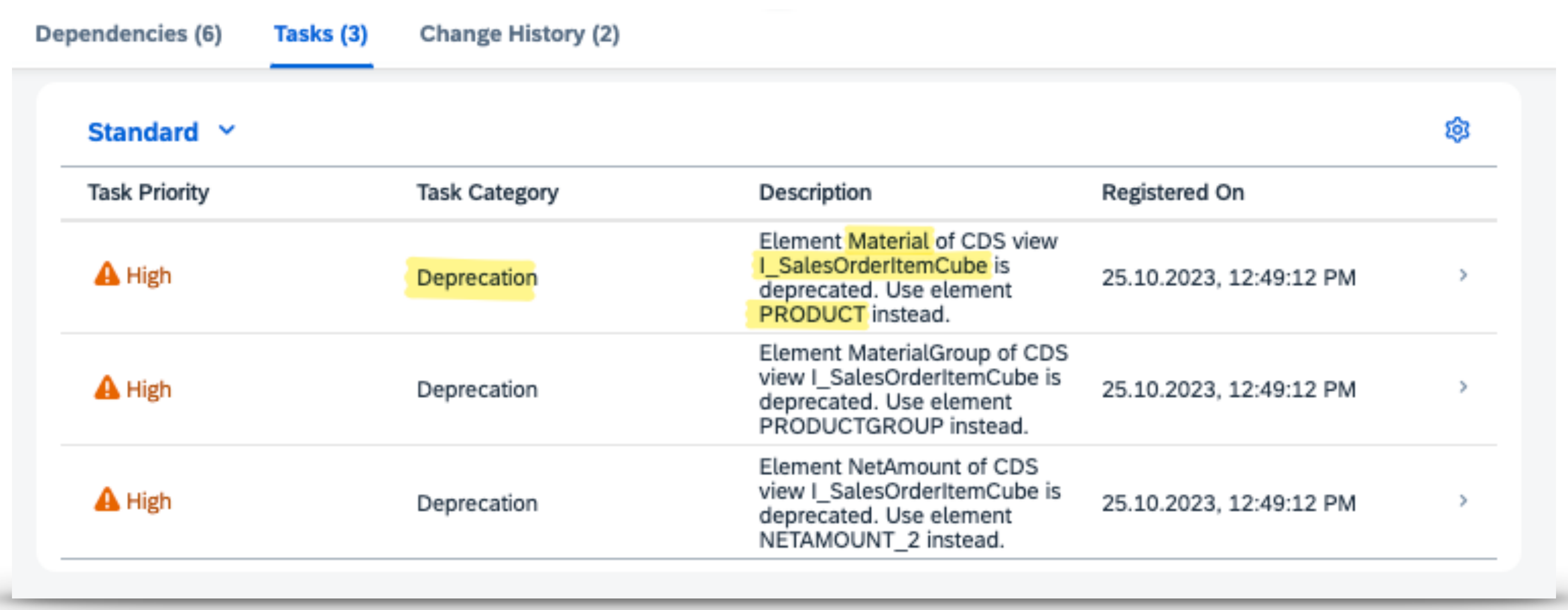
Item ID	Item Type	Item Description	Rework Priority	Rework Category	Hierarchy Le\	API State	Used By Item ID	Used By Item Type	Used By Item Description
YY1_DEPSALESORDERITEMA1	Custom CDS View	(DEP) Sales Order Item A1	High	Deprecation	1		YY1_DEPSALESORDERITEMCQ1	Custom Analytical Query	YY1_DEPSALESORDERITEMCQ1
YY1_DEPSALESORDERITEMCQ1	Custom Analytical Query	YY1_DEPSALESORDERITEMCQ1			2		YY1_1698230020161_AQWG	App for Analytical Querie	Sales Orders
YY1_DEPSALESORDERITEMCQ1	Custom Analytical Query	YY1_DEPSALESORDERITEMCQ1			2		YY1_K.1698230271114	Smart Business Content	Sales Analysis
YY1_K.1698230271114	Smart Business Content	Sales Analysis			3		YY1_F42UG4C4I4PN5HHEVJ46DZNPCU	Custom Catalog Extension	App YY1_1698231044889_SSB is used in business catalog SAP_SD_BC_ANLY_OPERATIONAL_PC.
YY1_K.1698230271114	Smart Business Content	Sales Analysis			3		YY1_F42UG4C4I4PN5HHFMKLCGCNPCU	Custom Catalog Extension	App YY1_1698230995253_SSB is used in business catalog SAP_SD_BC_ANLY_OPERATIONAL_PC.
YY1_1698230020161_AQWG	App for Analytical Queries	Sales Orders			3		YY1_F42UG4C4I4PN5HHGBNXL6JPPCU	Custom Catalog Extension	App YY1_1698230020161_AQWG is used in business catalog SAP_SD_BC_ANLY_OPERATIONAL_PC.

The Tasks section

This section will provide you with more technical details, that will uniquely and precisely identify the reason of the deprecation (i.e what is the object that is deprecated) and the successor object (the object that you must switch to).

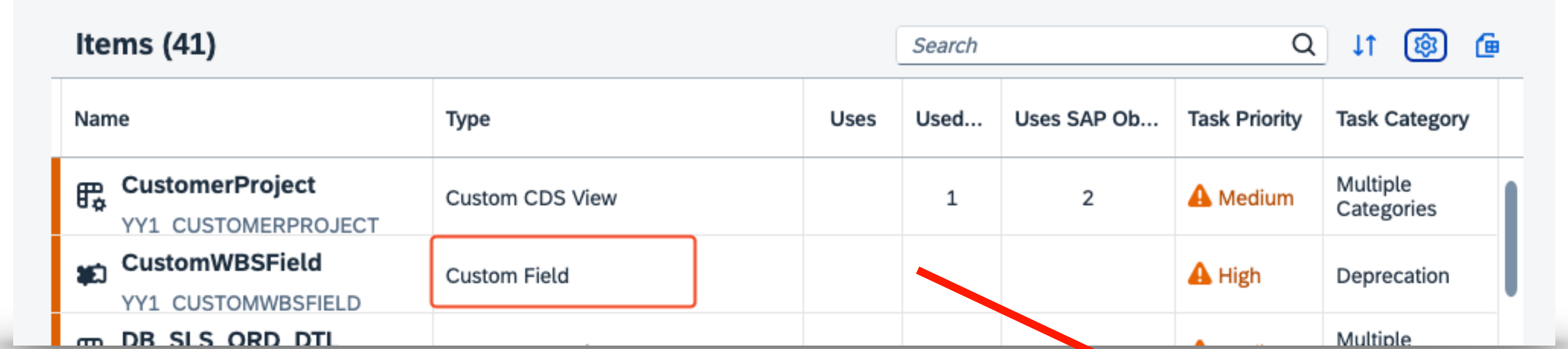
As we can see in the example below, our custom CDS is impacted by three deprecations. To be more specific we are given on each line, the name of the deprecated element and that of the SAP standard CDS from which we are sourcing it. More importantly, we are also provide with the name of the successor element.

The first line, in plain English is saying: The field `Material`, from the Standard SAP CDS named `I_SalesOrderItemCube`, that your custom CDS is using has been deprecated, and thus you should no longer use this field, and instead use the successor field named `PRODUCT`.



Task Priority	Task Category	Description	Registered On
⚠ High	Deprecation	Element Material of CDS view I_SalesOrderItemCube is deprecated. Use element PRODUCT instead.	25.10.2023, 12:49:12 PM
⚠ High	Deprecation	Element MaterialGroup of CDS view I_SalesOrderItemCube is deprecated. Use element PRODUCTGROUP instead.	25.10.2023, 12:49:12 PM
⚠ High	Deprecation	Element NetAmount of CDS view I_SalesOrderItemCube is deprecated. Use element NETAMOUNT_2 instead.	25.10.2023, 12:49:12 PM

Let’s now look at a Custom field that has been flagged as the object of a deprecation.



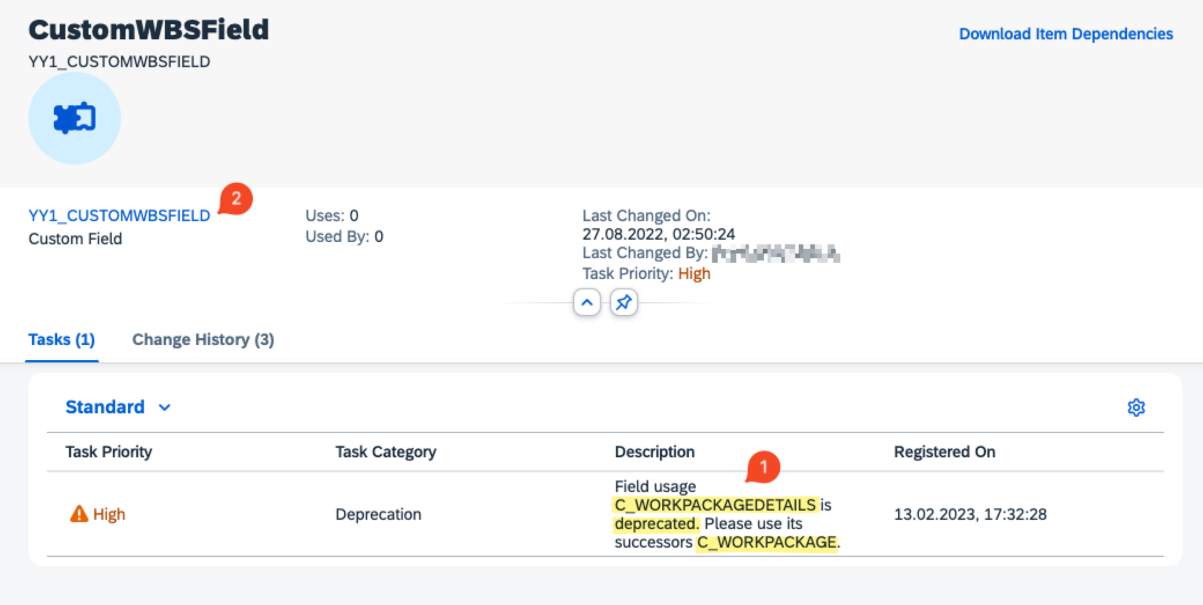
Items (41)

Name	Type	Uses	Used...	Uses SAP Ob...	Task Priority	Task Category
CustomerProject YY1_CUSTOMERPROJECT	Custom CDS View		1	2	⚠ Medium	Multiple Categories
CustomWBSField YY1_CUSTOMWBSFIELD	Custom Field				⚠ High	Deprecation
DB_SLS_ORD_DTL						Multiple

From the list of deprecated objects , we again click on the selected line to navigate to the object details.

Once we reach the detail screen, the first thing we can notice is that for this object there is no Dependencies section. However we are once again provided (1) with the useful information advising us of a deprecation, the object deprecated and the successor object.

At this point, you might be asking yourself, why am I getting a notification about a custom field deprecation in a SAP Standard CDS? Well actually, the notification is telling you that the object of the deprecation is the SAP Standard CDS, and this deprecation affects your custom field! So to try and get more details and better understand the relationship between our custom field and this SAP Standard CDS let’s go to the [Custom Fields]() app. Before we do this, let’s make a note of the custom field name (2). If you wish to pursue this use case, then please go to the chapter [The Custom Field App]().



CustomWBSField
YY1_CUSTOMWBSFIELD

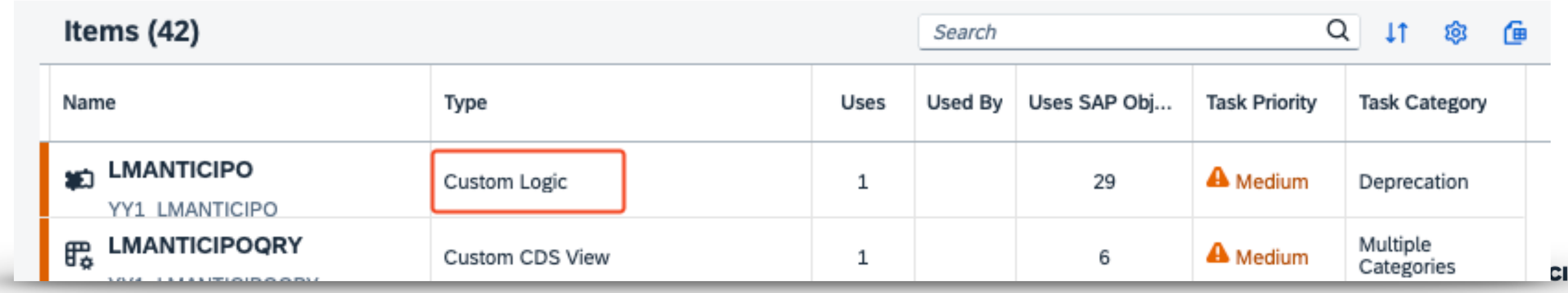
YY1_CUSTOMWBSFIELD (2)
Custom Field

Uses: 0
Used By: 0

Last Changed On:
27.08.2022, 02:50:24
Last Changed By: [redacted]
Task Priority: High

Task Priority	Task Category	Description (1)	Registered On
⚠ High	Deprecation	Field usage C_WORKPACKAGEDETAILS is deprecated. Please use its successors C_WORKPACKAGE.	13.02.2023, 17:32:28

Let’s now look at a Custom Logic that has been flagged as the object of a deprecation.

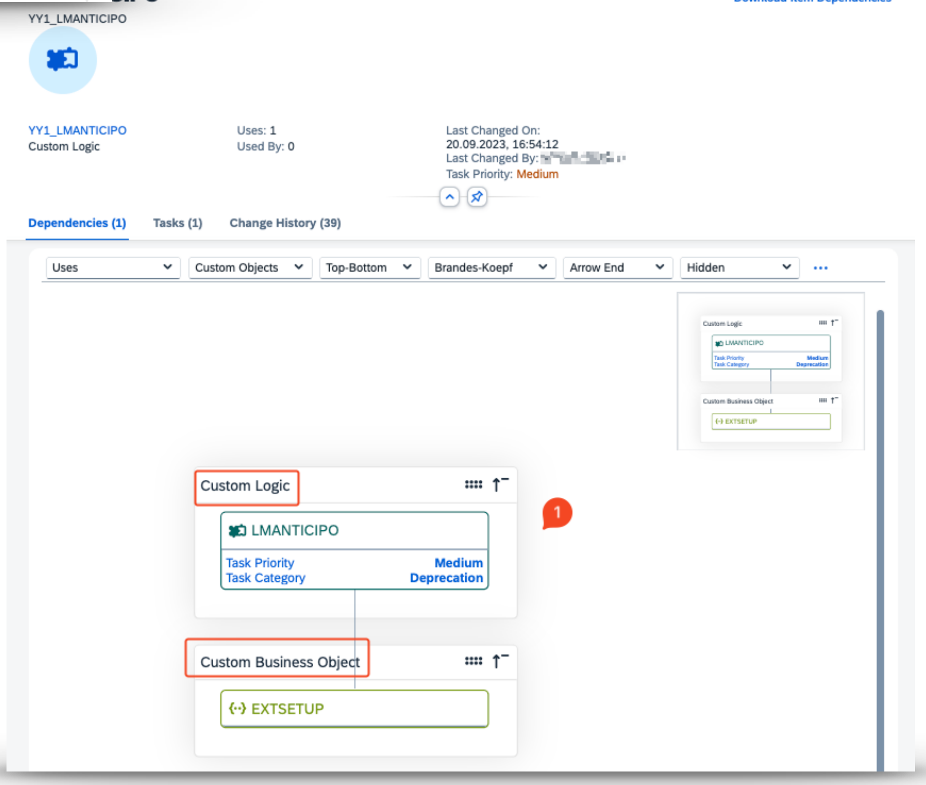


Items (42)

Name	Type	Uses	Used By	Uses SAP Obj...	Task Priority	Task Category
LMANTICIPO YY1_LMANTICIPO	Custom Logic	1		29	⚠ Medium	Deprecation
LMANTICIPOQRY YY1_LMANTICIPOQRY	Custom CDS View	1		6	⚠ Medium	Multiple Categories

From the list of deprecated objects , we again click on the selected line to navigate to the object details.

Once we reach the detail screen, the first thing we can notice is that for this object we again find that familiar graphical Dependencies section, which in this case establishes a link between the Custom Logic and a Custom Business Object.



CIPO

YY1_LMANTICIPO

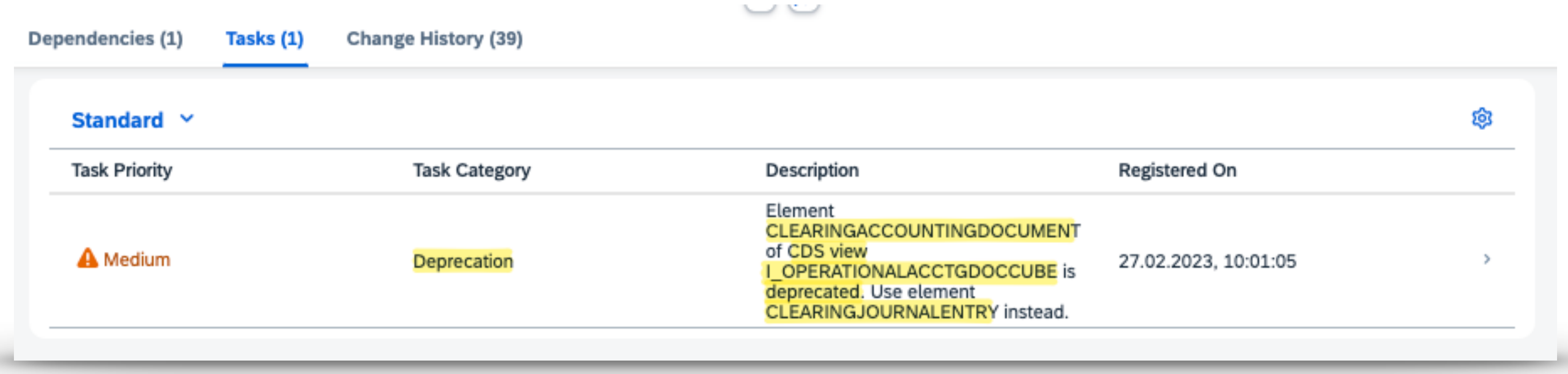
YY1_LMANTICIPO
Custom Logic

Uses: 1
Used By: 0

Last Changed On:
20.09.2023, 16:54:12
Last Changed By: [redacted]
Task Priority: Medium

We can then also move on to the Tasks tab to see what technical details we have there, because again at this point you might be asking yourself why are my Custom Objects being flagged for deprecation ?

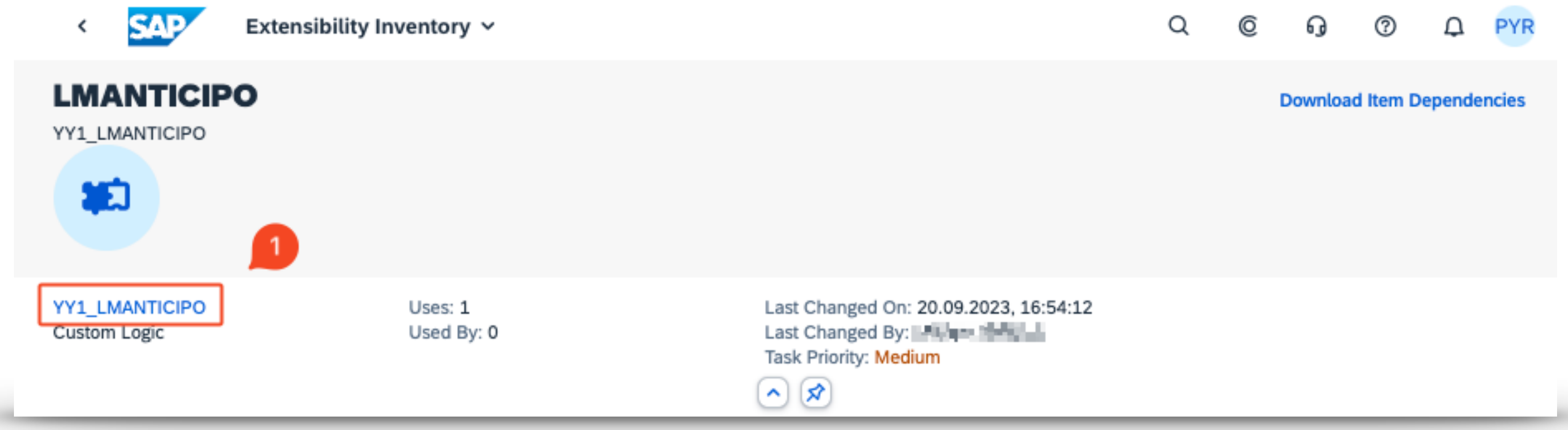
In the Tasks tab, we are getting closer to our answer, as we are provided with information pertaining to a deprecated field, that is part of a CDS we seemingly use and of course the name of the successor field is also provided here.



Task Priority	Task Category	Description	Registered On
⚠ Medium	Deprecation	Element CLEARINGACCOUNTINGDOCUMENT of CDS view I_OPERATIONALACCTGDOCCUBE is deprecated. Use element CLEARINGJOURNALENTRY instead.	27.02.2023, 10:01:05

To proceed with the next step of our investigation, we need to dig into this custom logic, so that we can see exactly where and how in our custom logic we are using this deprecated field.

In order to reach the custom logic, you can directly from the header of the extensibility inventory item header, click the link (1) shown, or you can access it using the Custom Logic app. Before we do this, let's make a note of the custom logic name (1) . If you wish to pursue this use case, then please go to the chapter The Custom Logic App.



LMANTICIPO

YY1_LMANTICIPO

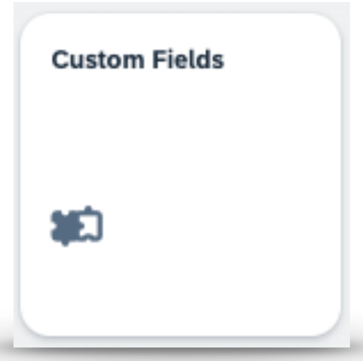
YY1_LMANTICIPO
Custom Logic

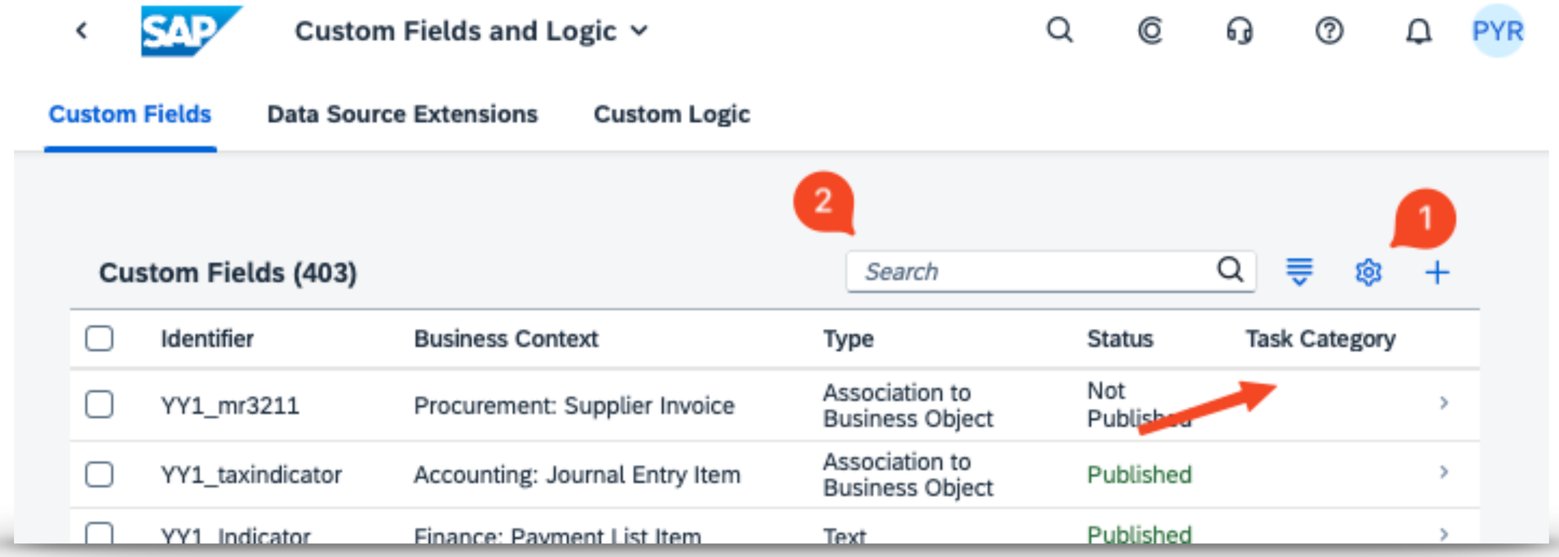
Uses: 1
Used By: 0

Last Changed On: 20.09.2023, 16:54:12
Last Changed By: [redacted]
Task Priority: Medium

The Custom Fields application

To be able to access this app, you will need to have the Business Catalog `SAP_CORE_BC_EXT_FLD` assigned to a Business Role, assigned to your business user. The initial screen of this app also shows a Task Category column advising you of possible issues with a given custom fields. Deprecation relevant items will be flagged in this column. If you do not see it, then click the personalisation (1) icon and bring the category column to your table. Alternatively, due to the limited filtering and sorting option afforded in this screen, you may wish to directly use the search box to find the custom field that you may be concerned with.

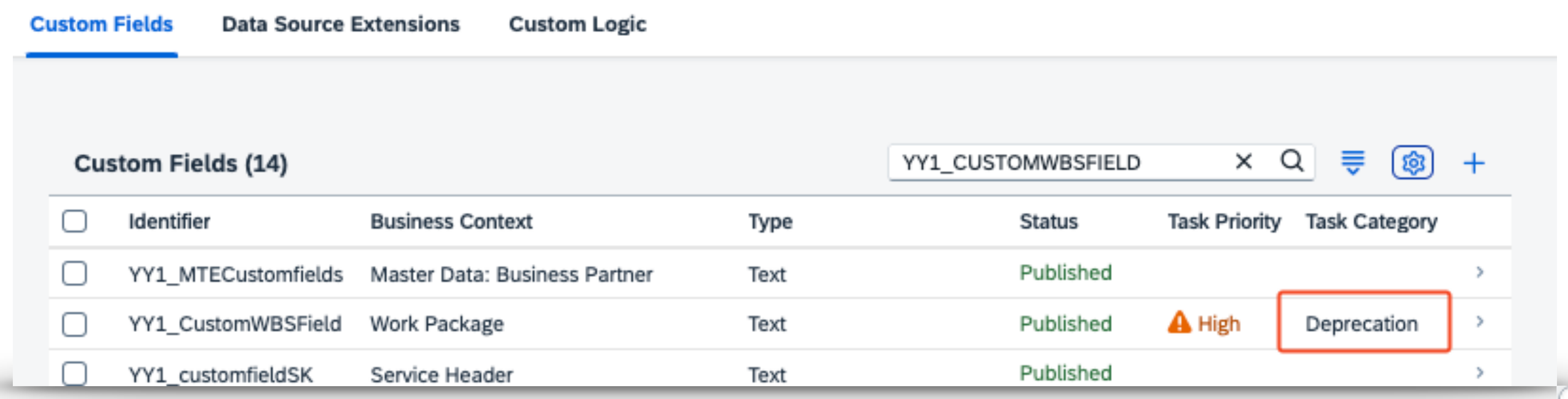




Custom Fields (403)

□	Identifier	Business Context	Type	Status	Task Category
□	YY1_mr3211	Procurement: Supplier Invoice	Association to Business Object	Not Published	
□	YY1_taxindicator	Accounting: Journal Entry Item	Association to Business Object	Published	
□	YY1_Indicator	Finance: Payment List Item	Text	Published	

In our case, and picking up on our example that we had identified in the Extensibility Inventory app, we opted to search for a custom field, and we also added the Task Priority column. As usual with such a list display, we can click on the line to access more details. Remember, here we are trying to make sense of this deprecation message, since this is a custom field after all, not an SAP managed field.

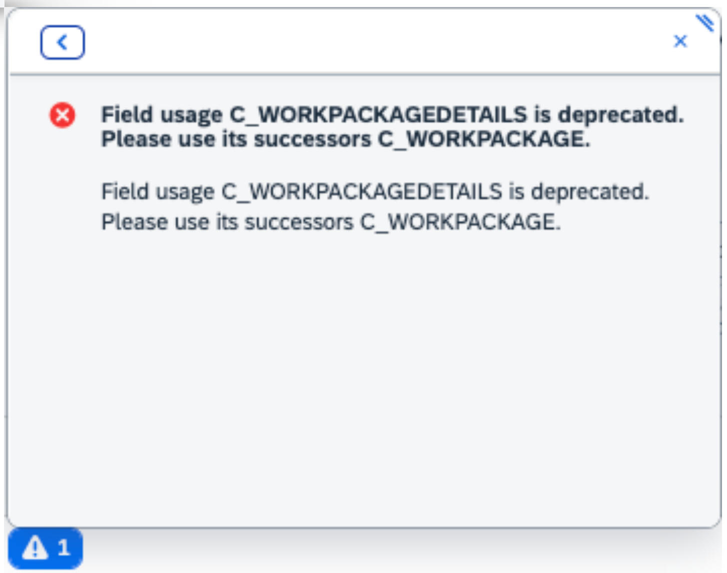


Custom Fields (14)

YY1_CUSTOMWBSFIELD

□	Identifier	Business Context	Type	Status	Task Priority	Task Category
□	YY1_MTECustomfields	Master Data: Business Partner	Text	Published		
□	YY1_CustomWBSField	Work Package	Text	Published	⚠ High	Deprecation
□	YY1_customfieldSK	Service Header	Text	Published		

After clicking on the line of interest, already when we reach the first screen, we see there is a warning message notification in the status bar. Selecting it reveals more details pertaining to the deprecation.



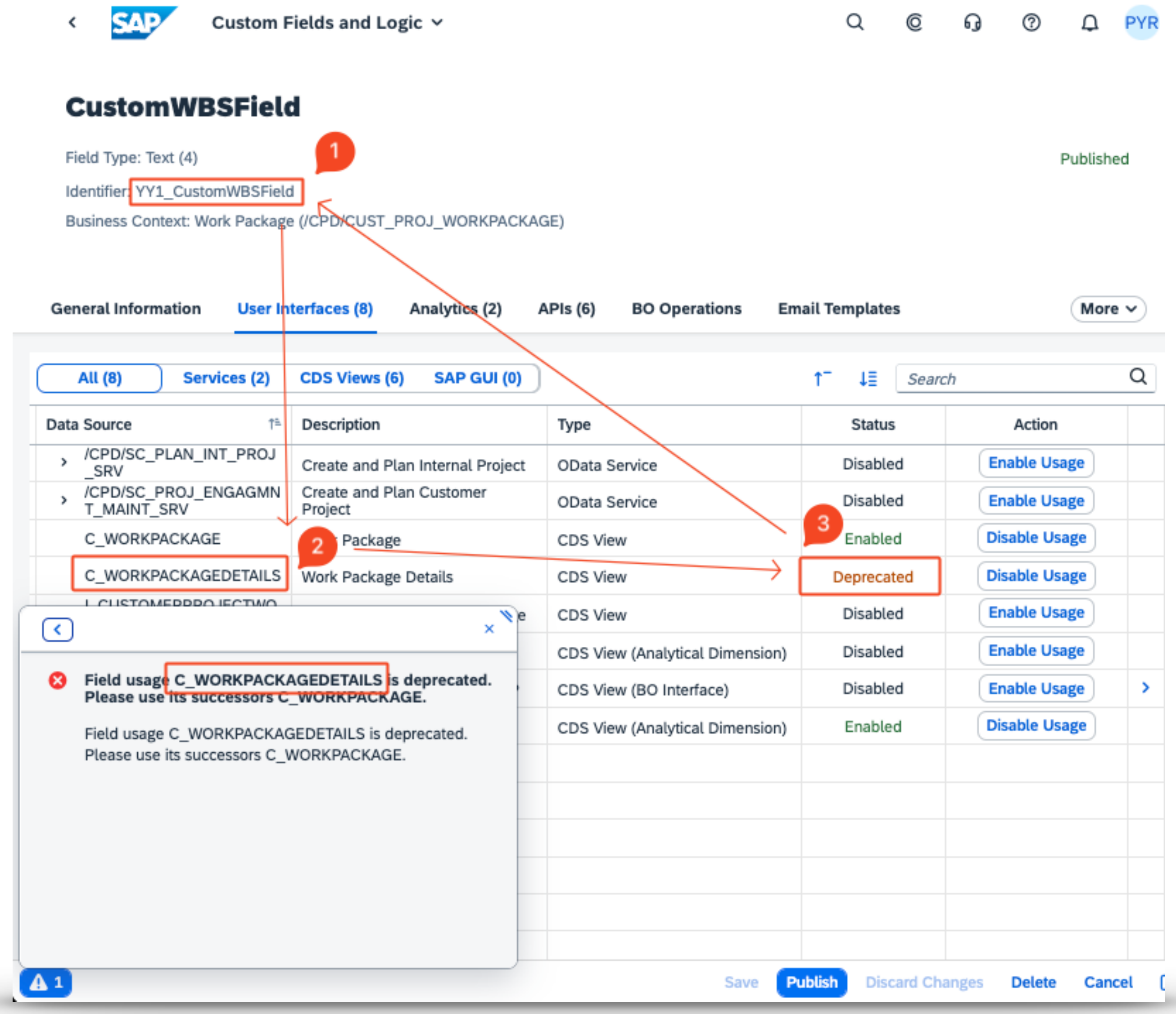
Field usage C_WORKPACKAGEDETAILS is deprecated. Please use its successors C_WORKPACKAGE.

Field usage C_WORKPACKAGEDETAILS is deprecated. Please use its successors C_WORKPACKAGE.

A custom field can be enabled for use in a number of objects (an API, a CDS, a UI, a form,…) so it is a case of cycling through the various tabs of this screen to see where our custom field is used and finding out where the deprecation is applicable.

In our case we can see that this information is available in the User Interfaces section / CDS views tab. This screen also now gives us clarity in the meaning of the deprecation message (it is not our custom field that is deprecated !).

The message was advising us that our custom field (1) was used in a CDS (2) that is deprecated (3). With the notification of the successor CDS, the takeaway is that we should use the successor CDS and enable our custom field in conjunction with the successor CDS



CustomWBSField

Field Type: Text (4)

Published

Identifier: YY1_CustomWBSField

Business Context: Work Package (/CPD/CUST_PROJ_WORKPACKAGE)

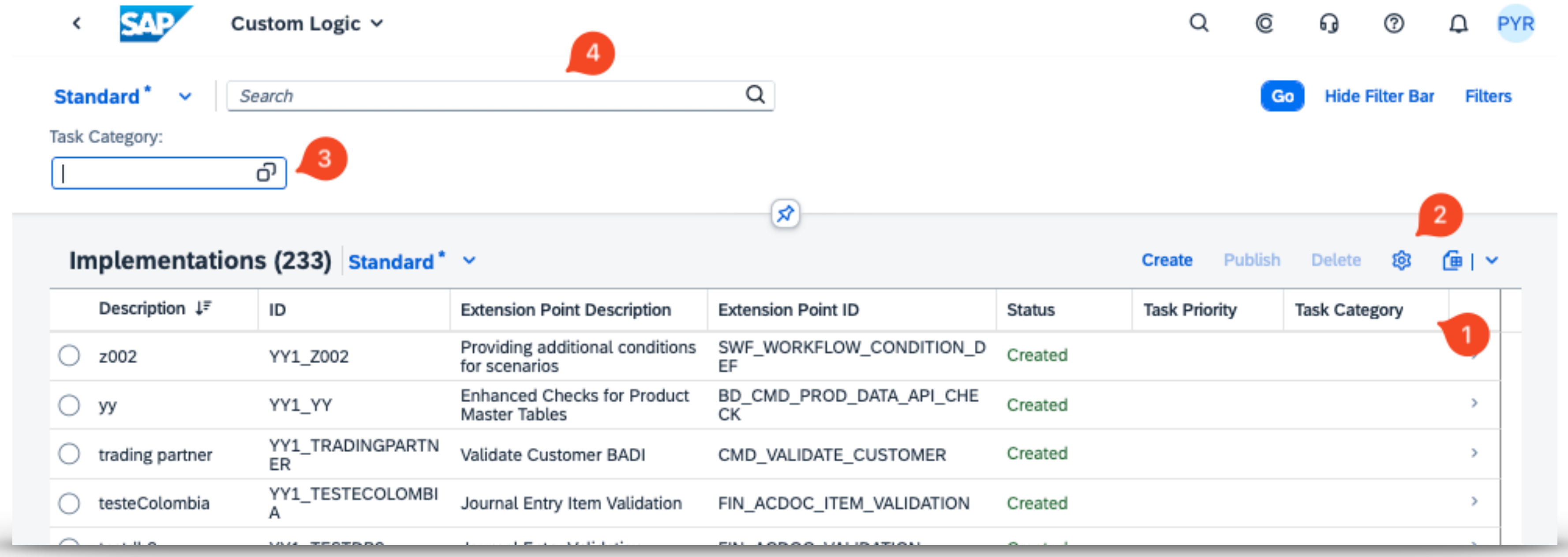
Data Source	Description	Type	Status	Action
/CPD/SC_PLAN_INT_PROJ_SRV	Create and Plan Internal Project	OData Service	Disabled	Enable Usage
/CPD/SC_PROJ_ENGAGMNT_MAINT_SRV	Create and Plan Customer Project	OData Service	Disabled	Enable Usage
C_WORKPACKAGE	Package	CDS View	Enabled	Disable Usage
C_WORKPACKAGEDETAILS	Work Package Details	CDS View	Deprecated	Disable Usage
I_CUSTOMERPROJECTWO	e	CDS View	Disabled	Enable Usage
		CDS View (Analytical Dimension)	Disabled	Enable Usage
		CDS View (BO Interface)	Disabled	Enable Usage
		CDS View (Analytical Dimension)	Enabled	Disable Usage

Field usage C_WORKPACKAGEDETAILS is deprecated. Please use its successors C_WORKPACKAGE.

Field usage C_WORKPACKAGEDETAILS is deprecated. Please use its successors C_WORKPACKAGE.

The Custom Logic application

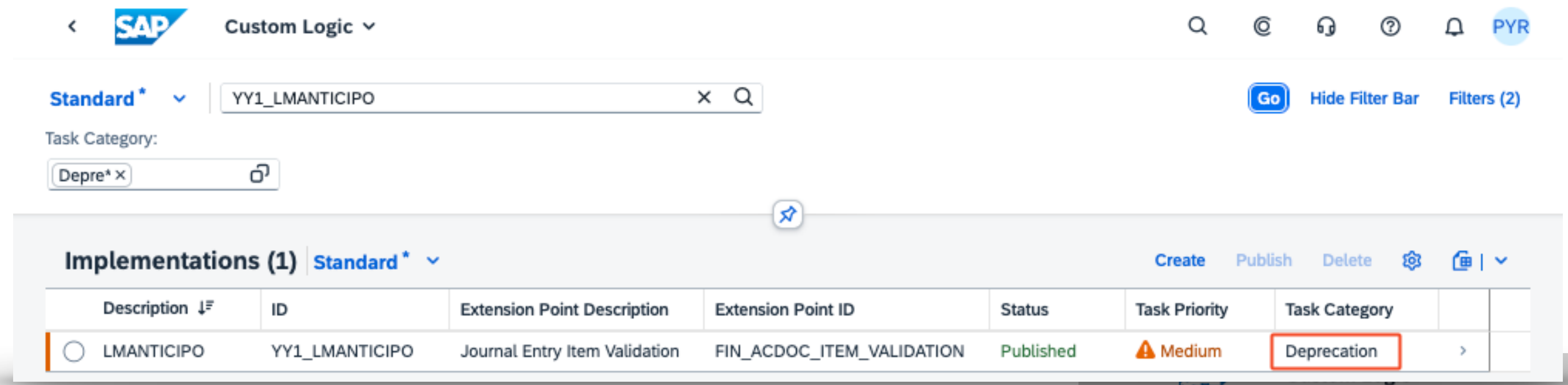
To be able to access this app, you will need to have the Business Catalog `SAP_CORE_BC_EXT_BLE` assigned to a Business Role, assigned to your business user. The initial screen of this app also shows a Task Category column advising you of possible issues with a given custom logic. Deprecation relevant items will be flagged in this column (1). If you do not see it, then click the personalisation (2) icon and bring the category column to your table. You can then enter the name of the custom logic you are looking for in the search (4) box and/or also look for items that are the object of a deprecation by entering *Depre** in the Task Category (3) filter.



Implementations (233)

Description	ID	Extension Point Description	Extension Point ID	Status	Task Priority	Task Category
z002	YY1_Z002	Providing additional conditions for scenarios	SWF_WORKFLOW_CONDITION_DEF	Created		
yy	YY1_YY	Enhanced Checks for Product Master Tables	BD_CMD_PROD_DATA_API_CHECK	Created		
trading partner	YY1_TRADINGPARTNER	Validate Customer BADI	CMD_VALIDATE_CUSTOMER	Created		
testeColombia	YY1_TESTECOLOMBIA	Journal Entry Item Validation	FIN_ACDOC_ITEM_VALIDATION	Created		

Once the list is updated with a list corresponding to our search results, we can as usual click on a line in the list to access the details.



YY1_LMANTICIPO

Task Category:

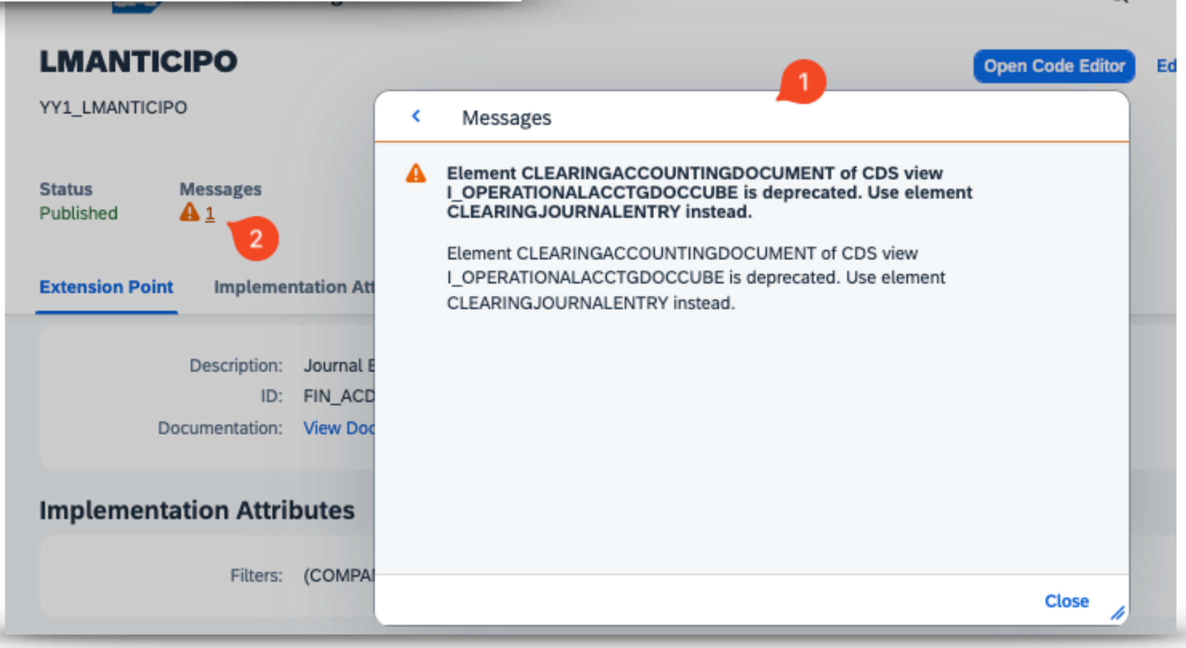
Depre* ✕

Implementations (1) Standard *

Description	ID	Extension Point Description	Extension Point ID	Status	Task Priority	Task Category
○ LMANTICIPO	YY1_LMANTICIPO	Journal Entry Item Validation	FIN_ACDOC_ITEM_VALIDATION	Published	⚠ Medium	Deprecation

As soon as you enter the detail screen, you will be greeted with a message (1), re-iterating the technical details of the deprecation.

You can also click on the Messages (2) hyperlink, to provide you with further details, including a more prescriptive message.



LMANTICIPO

YY1_LMANTICIPO

Status: Published

Messages: ⚠ 1

Description: Journal E

ID: FIN_ACD

Documentation: View Doc

Implementation Attributes

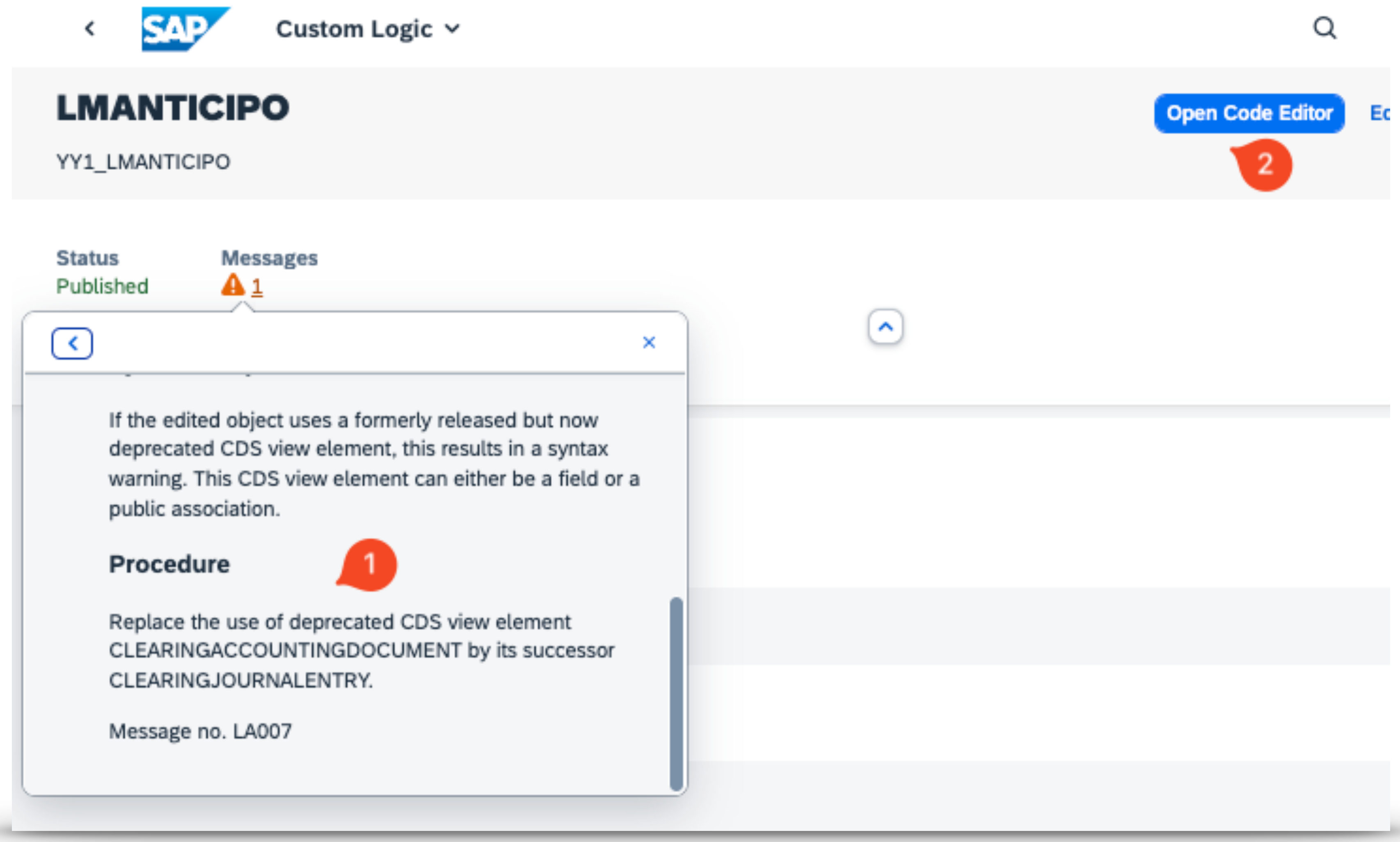
Filters: (COMPA

Messages

⚠ **Element CLEARINGACCOUNTINGDOCUMENT of CDS view I_OPERATIONALACCTGDOCCUBE is deprecated. Use element CLEARINGJOURNALENTRY instead.**

Element CLEARINGACCOUNTINGDOCUMENT of CDS view I_OPERATIONALACCTGDOCCUBE is deprecated. Use element CLEARINGJOURNALENTRY instead.

As you can see here, it is clearly telling you what you should do: Replace the deprecated element with the successor element. To proceed with the change, we need to delve into the code editor (2).



LMANTICIPO

YY1_LMANTICIPO

Status
Published

Messages
⚠ 1

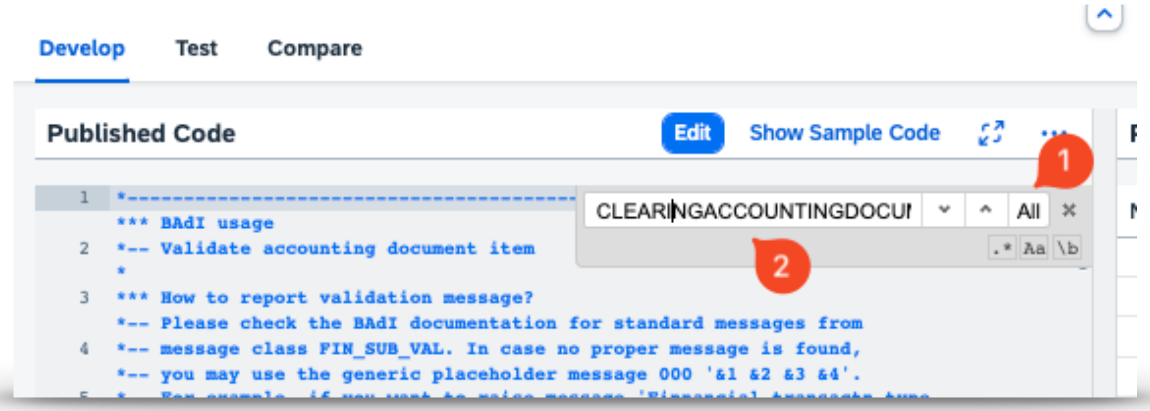
If the edited object uses a formerly released but now deprecated CDS view element, this results in a syntax warning. This CDS view element can either be a field or a public association.

Procedure

Replace the use of deprecated CDS view element CLEARINGACCOUNTINGDOCUMENT by its successor CLEARINGJOURNALENTRY.

Message no. LA007

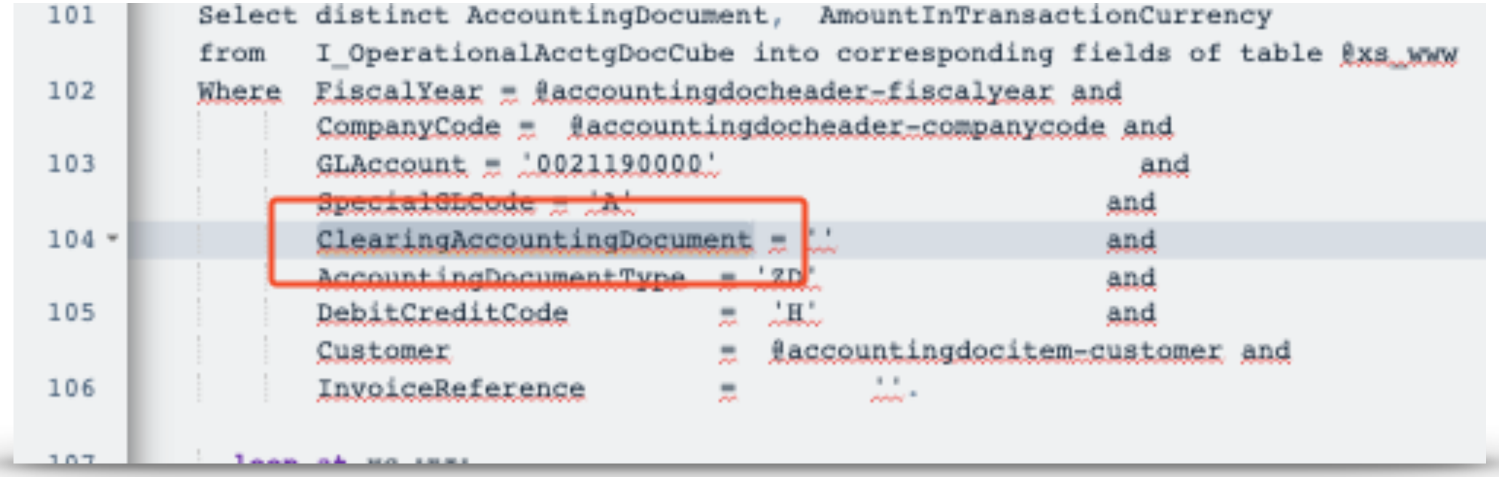
Once you are in the code editor, you can switch to Edit mode, if you are planning on actually making the change here and now, but you can also stay in display mode, if at this time you only want to identify where you will need to make changes. If your code is quite lengthy or complex, you can use the keyboard keys Ctrl + F, to open a search box (1) and enter in it, the name of the Deprecated CDS element (2) that you need to replace.



```
*-------------------------------------------
*** BAdI usage
*-- Validate accounting document item
*
*** How to report validation message?
*-- Please check the BAdI documentation for standard messages from
*-- message class FIN_SUB_VAL. In case no proper message is found,
*-- you may use the generic placeholder message 000 '&1 &2 &3 &4'.
```

You can then cycle through all the occurrences of the deprecated CDS element in your program and replace them with the successor CDS element.

Note, that in this case, we only needed to change a CDS element, it could also be that you need to change the CDS itself.

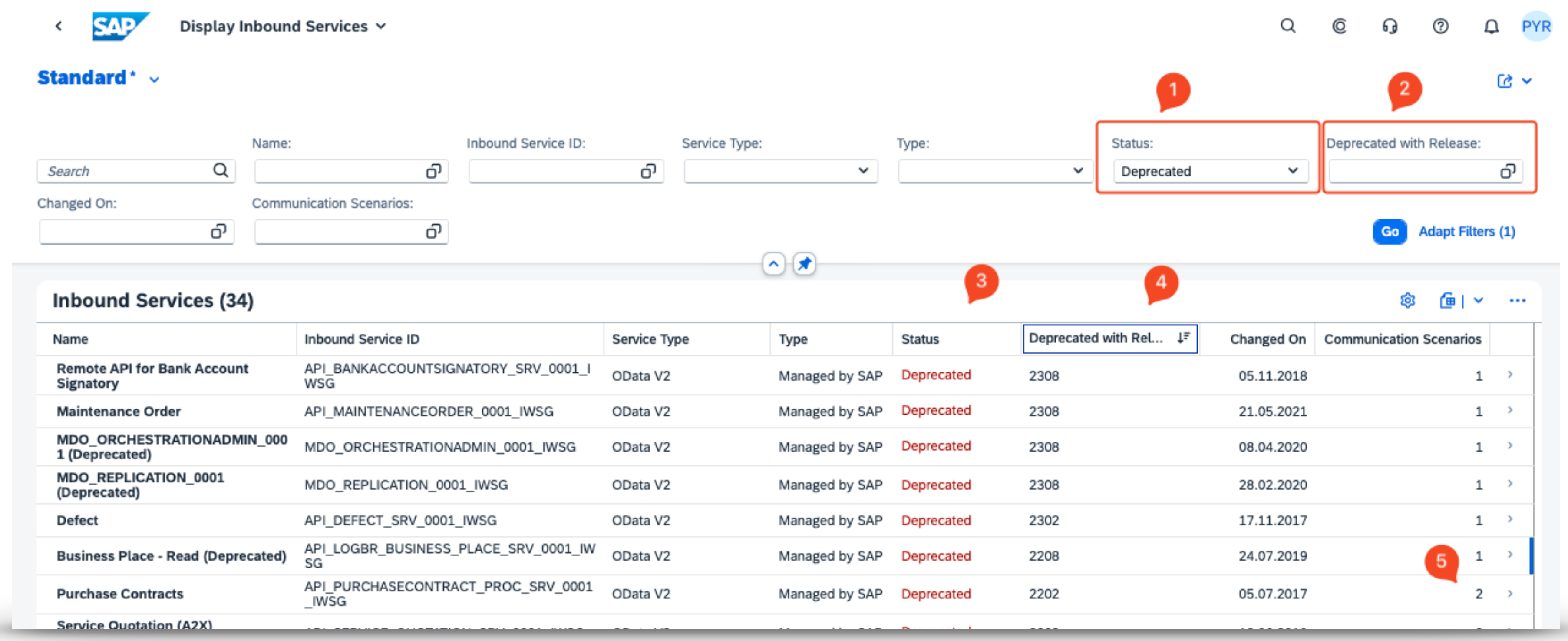


```
Select distinct AccountingDocument,  AmountInTransactionCurrency
from   I_OperationalAcctgDocCube into corresponding fields of table @xs_www
Where  FiscalYear = @accountingdocheader-fiscalyear and
       CompanyCode =  @accountingdocheader-companycode and
       GLAccount = '0021190000'                          and
       SpecialGLCode = 'A'                             and
       ClearingAccountingDocument = ''                 and
       AccountingDocumentType   = 'ZD'                 and
       DebitCreditCode          =  'H'                 and
       Customer                 =  @accountingdocitem-customer and
       InvoiceReference         =        ''.
```

The Display Inbound Services application

The Display Inbound Services application is an application that you will probably want to use if you have previously ascertained that an API you are using is deprecated, or maybe as part of your regular upgrade workflow, you will want to check if an API you are using is deprecated. But of course, once you know that an API is deprecated, you need to know in what communication arrangement(s) you are using it!

When you launch the application, unless you have already setup a display variant, it will likely display a large number of services, so you will probably first want to limit this list to just the deprecated APIs. To do so, adapt the filters and add the Status Filter (1) and restrict the filter with the value Deprecated. This is optional, but depending on your context, you can further limit the selection with a release (2) information. Once you click Go, the resulting list will display Deprecated services (3), the release at which it was deprecated (4). The older the release, if you are still using it, the greater the urgency might be to process the deprecation! Also note that an inbound service (API) could be used by more than one Communication Scenario (meaning that it may be used in more than one Communication Arrangement. We'll assume that we are interested in

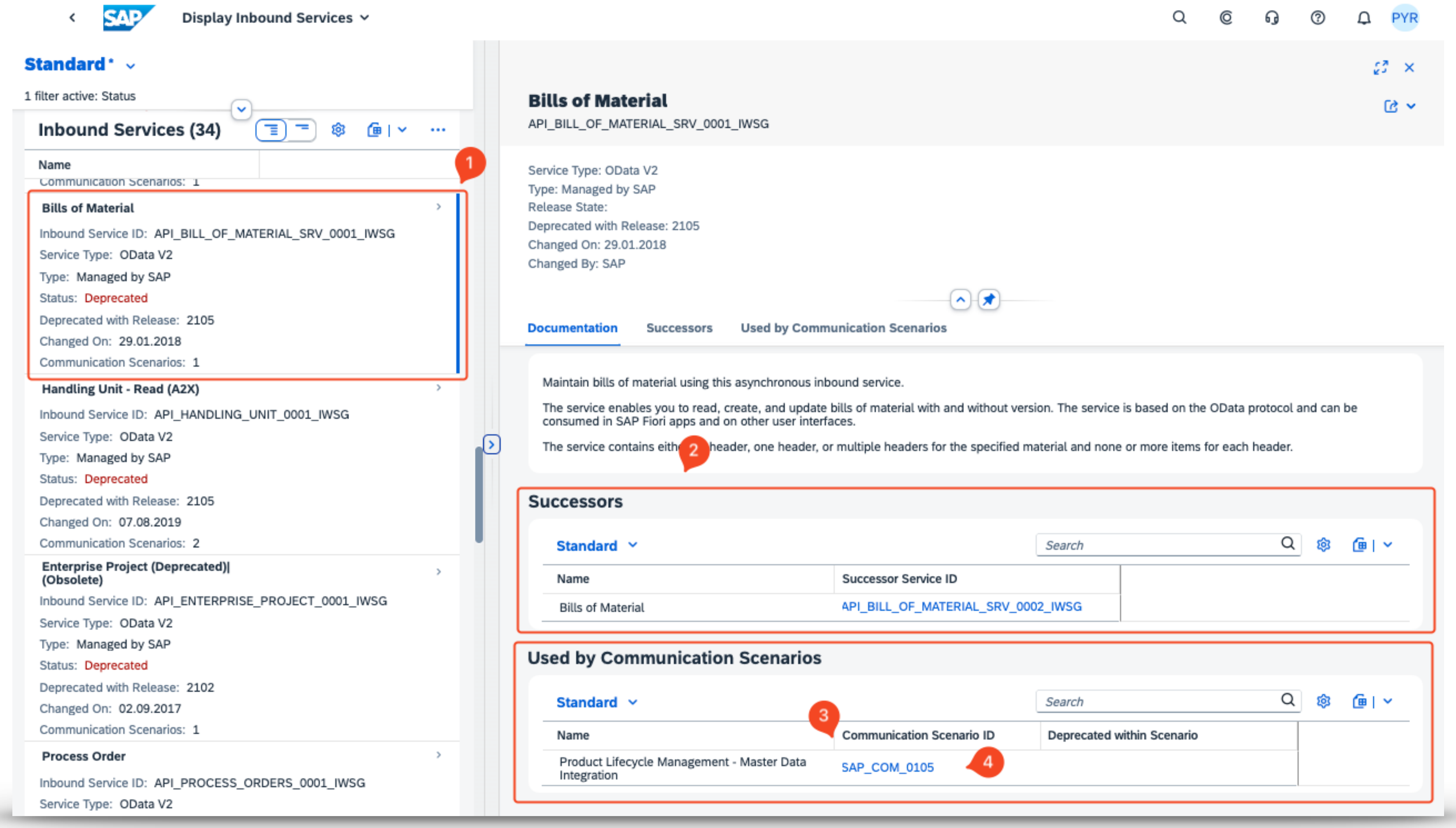


Search	
Name:	
Inbound Service ID:	
Service Type:	
Type:	
Status:	Deprecated
Deprecated with Release:	
Changed On:	
Communication Scenarios:	

Inbound Services (34)

Name	Inbound Service ID	Service Type	Type	Status	Deprecated with Rel...	Changed On	Communication Scenarios
Remote API for Bank Account Signatory	API_BANKACCOUNTSIGNATORY_SRV_0001_IWSG	OData V2	Managed by SAP	Deprecated	2308	05.11.2018	1
Maintenance Order	API_MAINTENANCEORDER_0001_IWSG	OData V2	Managed by SAP	Deprecated	2308	21.05.2021	1
MDO_ORCHESTRATIONADMIN_0001 (Deprecated)	MDO_ORCHESTRATIONADMIN_0001_IWSG	OData V2	Managed by SAP	Deprecated	2308	08.04.2020	1
MDO_REPLICATION_0001 (Deprecated)	MDO_REPLICATION_0001_IWSG	OData V2	Managed by SAP	Deprecated	2308	28.02.2020	1
Defect	API_DEFECT_SRV_0001_IWSG	OData V2	Managed by SAP	Deprecated	2302	17.11.2017	1
Business Place - Read (Deprecated)	API_LOGBR_BUSINESS_PLACE_SRV_0001_IWSG	OData V2	Managed by SAP	Deprecated	2208	24.07.2019	1
Purchase Contracts	API_PURCHASECONTRACT_PROC_SRV_0001_IWSG	OData V2	Managed by SAP	Deprecated	2202	05.07.2017	2
Service Quotation (A2X)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

finding more information on one such API, which is going to be `API_BILL_OF_MATERIAL_SRV_0001_IWSG`. To get further details on our chosen service, we click on the line (1) corresponding to it. A new pane will open to the right of your window, revealing more details on this service. An important piece of information that you may have already inventoried, is the (2) successor service (API) that you should transition to. More importantly, we can now also identify the SAP communication scenario(s), that make use of this (3) inbound service. This will help us to identify which communication arrangement(s) we have setup, that make use of this deprecated service! To find that information we need to navigate to the Display Communication Scenarios application which we will cover in the next chapter. To do so , we can click on the communication scenario ID (4), or open the application that goes with the same name, the Display Communication Scenarios Application.



Standard *

1 filter active: Status

Inbound Services (34)

Name

Communication Scenarios: 1

Bills of Material
Inbound Service ID: API_BILL_OF_MATERIAL_SRV_0001_IWSG
Service Type: OData V2
Type: Managed by SAP
Status: Deprecated
Deprecated with Release: 2105
Changed On: 29.01.2018
Communication Scenarios: 1

Handling Unit - Read (A2X)
Inbound Service ID: API_HANDLING_UNIT_0001_IWSG
Service Type: OData V2
Type: Managed by SAP
Status: Deprecated
Deprecated with Release: 2105
Changed On: 07.08.2019
Communication Scenarios: 2

Enterprise Project (Deprecated)| (Obsolete)
Inbound Service ID: API_ENTERPRISE_PROJECT_0001_IWSG
Service Type: OData V2
Type: Managed by SAP
Status: Deprecated
Deprecated with Release: 2102
Changed On: 02.09.2017
Communication Scenarios: 1

Process Order
Inbound Service ID: API_PROCESS_ORDERS_0001_IWSG
Service Type: OData V2

Bills of Material
API_BILL_OF_MATERIAL_SRV_0001_IWSG

Service Type: OData V2
Type: Managed by SAP
Release State:
Deprecated with Release: 2105
Changed On: 29.01.2018
Changed By: SAP

Documentation | Successors | Used by Communication Scenarios

Maintain bills of material using this asynchronous inbound service.

The service enables you to read, create, and update bills of material with and without version. The service is based on the OData protocol and can be consumed in SAP Fiori apps and on other user interfaces.

The service contains eith header, one header, or multiple headers for the specified material and none or more items for each header.

Successors

Standard

Search

Name	Successor Service ID
Bills of Material	API_BILL_OF_MATERIAL_SRV_0002_IWSG

Used by Communication Scenarios

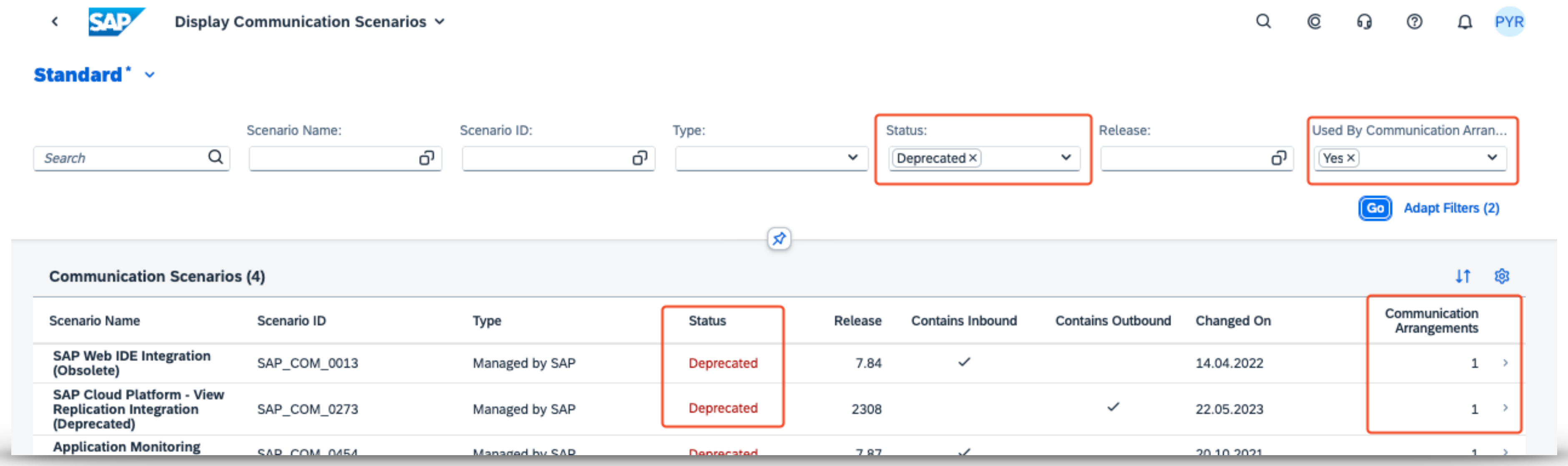
Standard

Search

Name	Communication Scenario ID	Deprecated within Scenario
Product Lifecycle Management - Master Data Integration	SAP_COM_0105	

The Display Communication Scenarios Application

This application will be helpful to understand if you are using a deprecated API and if you are, in which communication arrangement it is being used. In SAP S/4HANA Cloud, API's are implemented through communication arrangements. That is, you need to create a communication arrangement, by referencing a SAP Standard Scenario ID (they usually have a technical name such as `SAP_COM_NNNN`, where NNNN is a four digit numerical value). A SAP Scenario, will usually logically group together APIs (i.e they are related due to their functions, such as Integration to Success Factors or line of business, such as Asset Management). Compared to previously seen apps, the Display Communication Scenarios application does not have a rework task or priority indicator. However it has a Deprecated (Yes or No) indicator. That said a subtle distinction must be made, in that a Communication Scenario can be deprecated, which is not the same as Communication Scenario that is not deprecated, that includes one or more deprecated APIs! To only see those communication scenarios that are deprecated, then restrict the Status filter by choosing the Deprecated value. You can further restrict the result by opting to only see those scenarios that you actually use (i.e are used in a communication arrangement), by restricting the Used By Communication Arrangement
filter to Yes.



Scenario Name:

Scenario ID:

Type:

Status: Deprecated

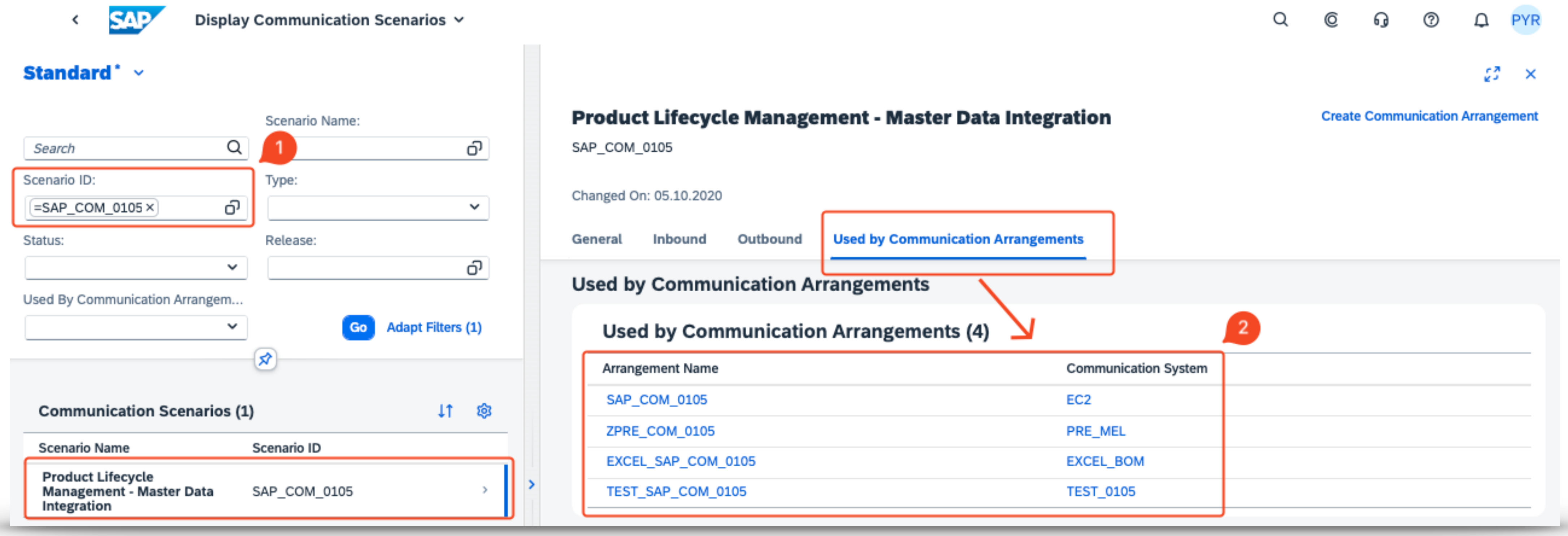
Release:

Used By Communication Arran...: Yes

Communication Scenarios (4)

Scenario Name	Scenario ID	Type	Status	Release	Contains Inbound	Contains Outbound	Changed On	Communication Arrangements
SAP Web IDE Integration (Obsolete)	SAP_COM_0013	Managed by SAP	Deprecated	7.84	✓		14.04.2022	1
SAP Cloud Platform - View Replication Integration (Deprecated)	SAP_COM_0273	Managed by SAP	Deprecated	2308		✓	22.05.2023	1
Application Monitoring	SAP_COM_0454	Managed by SAP	Deprecated	7.87	✓		20.10.2021	1

Another way, if you already know the ID of the communication scenario you are interested in, or if you clicked on the communication scenario ID in the Display Inbound Services application, you can use the Scenario ID (1) filter. As usual, you can click on the resulting line, which will reveal a details pane on the right. The information we are seeking here, is the Used by Communication Arrangements tab (2) - as the name indicates, this will allow you to identify your communication arrangement(s) that use this API, as well as the communication system that is connected to your SAP S/4HANA Cloud system. From here you can further drill down to the Communication Arrangement or the Communication System, by clicking on the hyperlink that corresponds to them.


Display Communication Scenarios
PYR
Standard*
Search
Scenario Name:
1
Type:
Status:
Release:
Used By Communication Arrangem...
Go
Adapt Filters (1)
General
Inbound
Outbound
Used by Communication Arrangements
Create Communication Arrangement
2

Scenario ID: =SAP_COM_0105

Communication Scenarios (1)

Scenario Name	Scenario ID
Product Lifecycle Management - Master Data Integration	SAP_COM_0105

Product Lifecycle Management - Master Data Integration

SAP_COM_0105

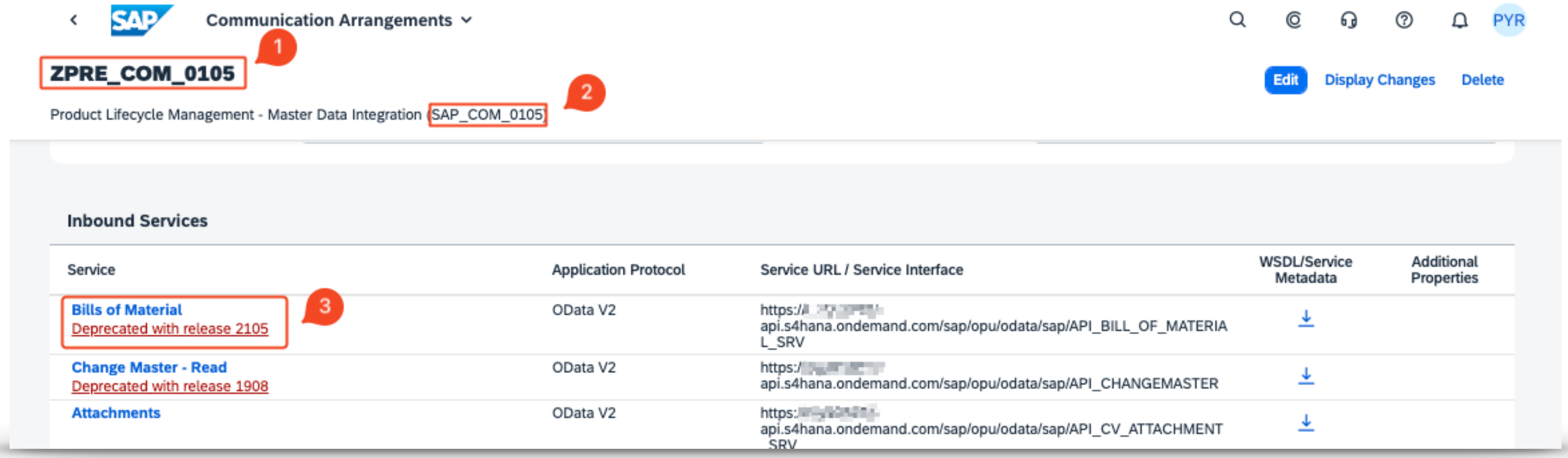
Changed On: 05.10.2020

Used by Communication Arrangements

Used by Communication Arrangements (4)

Arrangement Name	Communication System
SAP_COM_0105	EC2
ZPRE_COM_0105	PRE_MEL
EXCEL_SAP_COM_0105	EXCEL_BOM
TEST_SAP_COM_0105	TEST_0105

For the sake of completeness, we will click on the hyperlink that corresponds to one of those identified Communication Arrangements. This will allow us to navigate to the Communication Arrangements application. Once we reach the application and the details of the communication arrangement we selected are displayed, we can indeed see our communication arrangement (1), the SAP Communication Scenario ID (2) and finally, the service that we identified as used and deprecated (3) originally.



ZPRE_COM_0105

Product Lifecycle Management - Master Data Integration (SAP_COM_0105)

Inbound Services

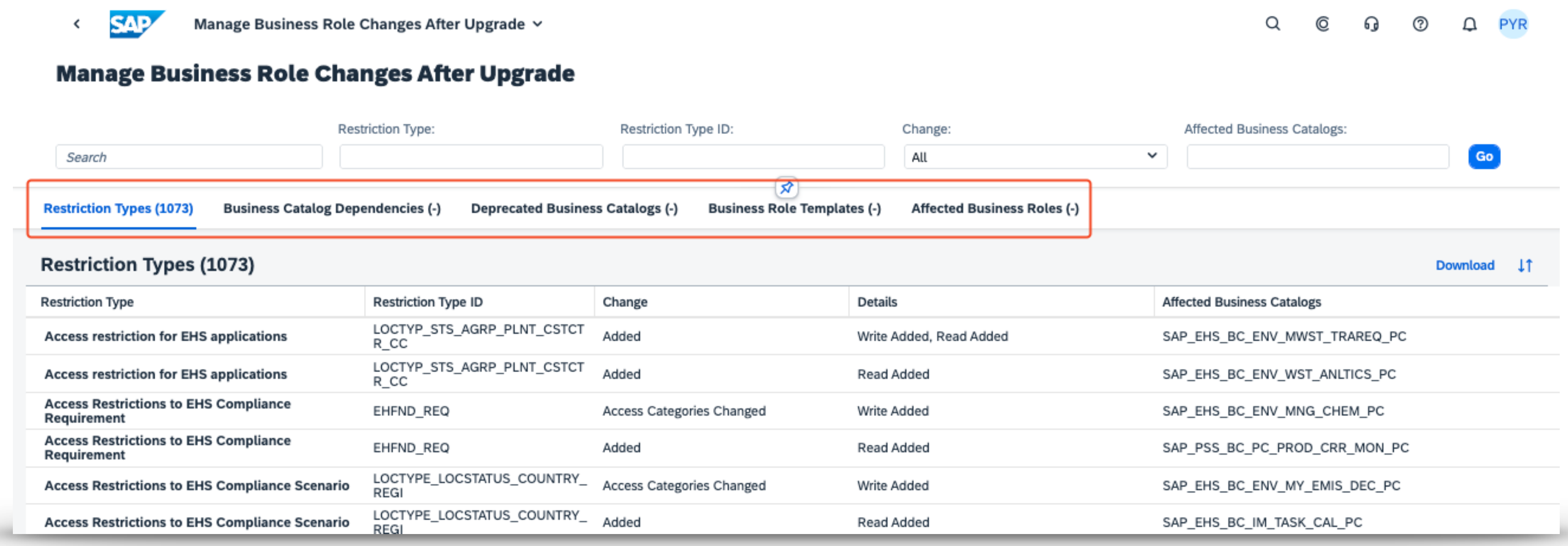
Service	Application Protocol	Service URL / Service Interface	WSDL/Service Metadata	Additional Properties
Bills of Material Deprecated with release 2105	OData V2	https://[redacted] api.s4hana.ondemand.com/sap/opu/odata/sap/API_BILL_OF_MATERIAL_SRV	↓	
Change Master - Read Deprecated with release 1908	OData V2	https://[redacted] api.s4hana.ondemand.com/sap/opu/odata/sap/API_CHANGEMASTER	↓	
Attachments	OData V2	https:[redacted] api.s4hana.ondemand.com/sap/opu/odata/sap/API_CV_ATTACHMENT_SRV	↓	

The Manage Business Role Changes After Upgrade Application

This Manage Business Role Changes After Upgrade application really is your workhorse application if you are responsible for analysing and/or processing changes and deprecations to what I would broadly refer to as IAM (Identity Access Management) objects. That is, restrictions, business catalogs and business roles, as the key ones but not only. Whilst this app goes beyond this, we will for the purpose of this document only focus on its use in the context of Deprecations. In order to utilise this application you will need to have an administrator type catalog (such as `SAP_CORE_BC_IAM_UPGRADE`, `SAP_CORE_BC_IAM_UM`, `SAP_CORE_BC_IAM_RA`, etc...) assigned to a business role assigned to your user.

We will here provide a brief introduction to this application, but not focus greatly on it as a wealth of blogs and tutorials already exist for it on the internet, some of which we will suggest in the further reading section. This application allows for what I would call a bi-directional analysis. I.e you could for example start by looking at Restrictions and find out which of your roles are affected by this change, but you could also start by looking at one of your roles and drill down to all the changes that affect it.

Upon first entering the application, you will see a screen and list, similar to the one below, offering a number of tabs to segregate the object you want to look at. The filters that are available for every tab are contextual, and will change depending on the tab you are on.

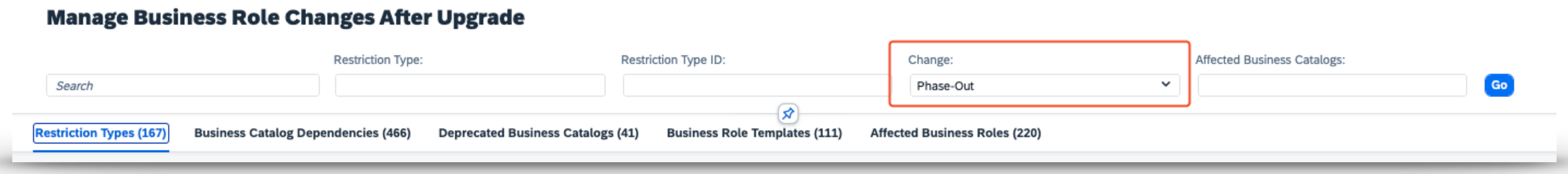

SAP
Manage Business Role Changes After Upgrade
PYR
Manage Business Role Changes After Upgrade
Search
Restriction Type:
Restriction Type ID:
Change:
All
Affected Business Catalogs:
Go
Restriction Types (1073)
Business Catalog Dependencies (-)
Deprecated Business Catalogs (-)
Business Role Templates (-)
Affected Business Roles (-)
Download

Restriction Types (1073)

Restriction Type	Restriction Type ID	Change	Details	Affected Business Catalogs
Access restriction for EHS applications	LOCTYP_STS_AGRP_PLNT_CSTCTR_CC	Added	Write Added, Read Added	SAP_EHS_BC_ENV_MWST_TRAREQ_PC
Access restriction for EHS applications	LOCTYP_STS_AGRP_PLNT_CSTCTR_CC	Added	Read Added	SAP_EHS_BC_ENV_WST_ANLTICS_PC
Access Restrictions to EHS Compliance Requirement	EHFND_REQ	Access Categories Changed	Write Added	SAP_EHS_BC_ENV_MNG_CHEM_PC
Access Restrictions to EHS Compliance Requirement	EHFND_REQ	Added	Read Added	SAP_PSS_BC_PC_PROD_CRR_MON_PC
Access Restrictions to EHS Compliance Scenario	LOCTYPE_LOCSTATUS_COUNTRY_REGI	Access Categories Changed	Write Added	SAP_EHS_BC_ENV_MY_EMIS_DEC_PC
Access Restrictions to EHS Compliance Scenario	LOCTYPE_LOCSTATUS_COUNTRY_REGI	Added	Read Added	SAP_EHS_BC_IM_TASK_CAL_PC

Restriction Types

Since you are interested in Deprecations, the first thing you will want, is to change the selection filters, such that the change type shown is Phase-Out. This status denotes that the restriction will be removed in the next release.



Manage Business Role Changes After Upgrade

Search

Restriction Type:

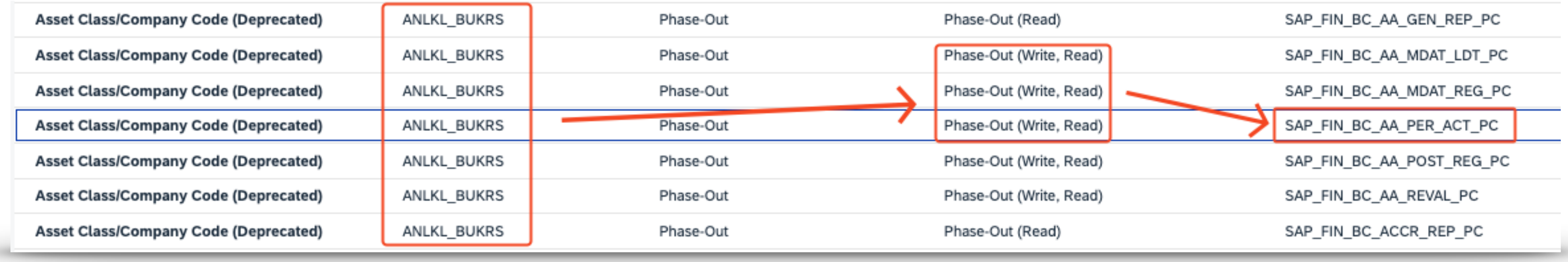
Restriction Type ID:

Change: Phase-Out

Affected Business Catalogs:

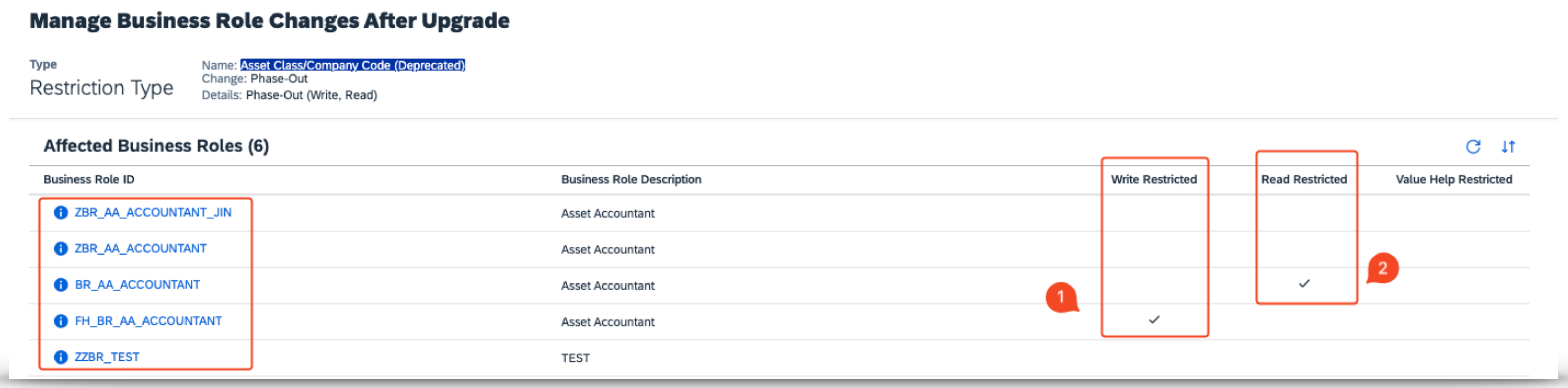
Restriction Types (167) | Business Catalog Dependencies (466) | Deprecated Business Catalogs (41) | Business Role Templates (111) | Affected Business Roles (220)

Note that the resulting output might lead to a restriction being present multiple times. This multiplication in appearances could be due to the restriction being used in several catalogs and/or with varying uses (Read, Write, Value Help).



Asset Class/Company Code (Deprecated)	ANLKL_BUKRS	Phase-Out	Phase-Out (Read)	SAP_FIN_BC_AA_GEN_REP_PC
Asset Class/Company Code (Deprecated)	ANLKL_BUKRS	Phase-Out	Phase-Out (Write, Read)	SAP_FIN_BC_AA_MDAT_LDT_PC
Asset Class/Company Code (Deprecated)	ANLKL_BUKRS	Phase-Out	Phase-Out (Write, Read)	SAP_FIN_BC_AA_MDAT_REG_PC
Asset Class/Company Code (Deprecated)	ANLKL_BUKRS	Phase-Out	Phase-Out (Write, Read)	SAP_FIN_BC_AA_PER_ACT_PC
Asset Class/Company Code (Deprecated)	ANLKL_BUKRS	Phase-Out	Phase-Out (Write, Read)	SAP_FIN_BC_AA_POST_REG_PC
Asset Class/Company Code (Deprecated)	ANLKL_BUKRS	Phase-Out	Phase-Out (Write, Read)	SAP_FIN_BC_AA_REVAL_PC
Asset Class/Company Code (Deprecated)	ANLKL_BUKRS	Phase-Out	Phase-Out (Read)	SAP_FIN_BC_ACCR_REP_PC

Clicking on one line, will provide us with more details, but this is subject to the Restrictions actually being restricted (indeed if a restriction is Unrestricted or No access, then concern for this phase out does not really exist) in the catalog and role where it is used. If we click on a line, the detail presented will be similar to this.



Manage Business Role Changes After Upgrade

Type
Restriction Type

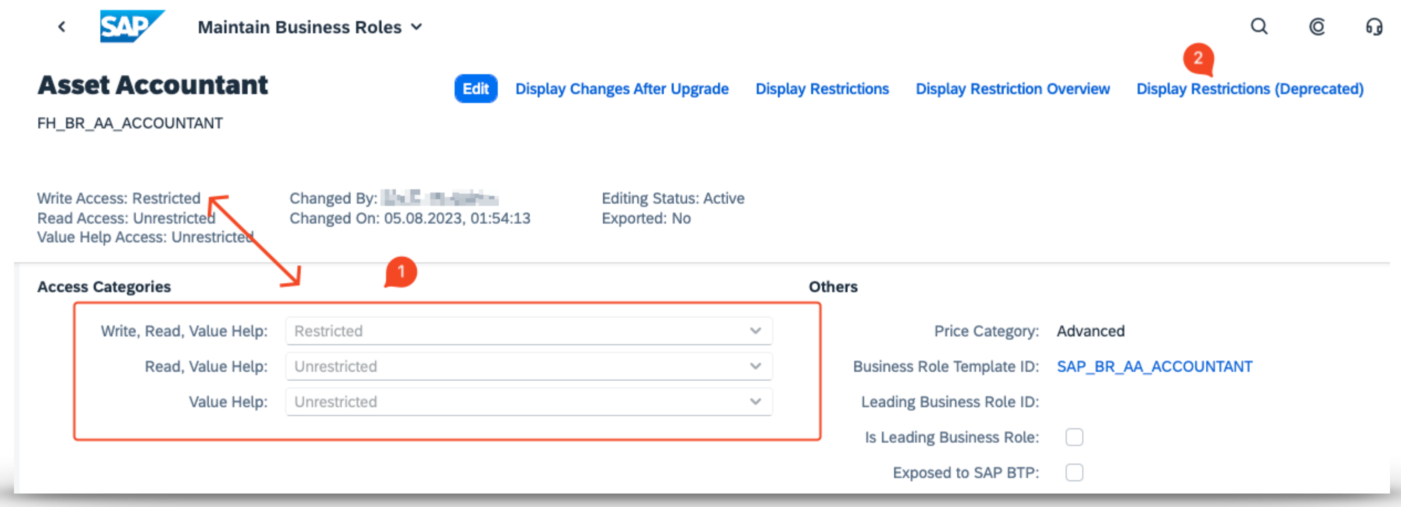
Name: Asset Class/Company Code (Deprecated)
Change: Phase-Out
Details: Phase-Out (Write, Read)

Affected Business Roles (6)

Business Role ID	Business Role Description	Write Restricted	Read Restricted	Value Help Restricted
ZBR_AA_ACCOUNTANT_JIN	Asset Accountant			
ZBR_AA_ACCOUNTANT	Asset Accountant			
BR_AA_ACCOUNTANT	Asset Accountant		✓	
FH_BR_AA_ACCOUNTANT	Asset Accountant	✓		
ZZBR_TEST	TEST			

This detail is essentially advising us, that the Restriction Type Asset Class/Company Code, is used in the business catalog `SAP_FIN_BC_AA_PER_ACT_PC` (selection from the previous screen), and that this business catalog is used in 6 business roles. It is also telling us that the restriction is Write Restricted (1) in one role, and Read Restricted in another role (2). The business roles that appear in the detail screen, are hyperlinked to the business role in question. Let's click on the hyperlink of the role `FH_BR_AA_ACCOUNTANT` (the one write restricted)(1) to navigate to the business role itself.

As soon as we enter the business role, we can indeed confirm that it is Write Restricted (1).



Maintain Business Roles

Asset Accountant

FH_BR_AA_ACCOUNTANT

Edit | Display Changes After Upgrade | Display Restrictions | Display Restriction Overview | Display Restrictions (Deprecated)

Write Access: Restricted
Read Access: Unrestricted
Value Help Access: Unrestricted

Changed By: [redacted]
Changed On: 05.08.2023, 01:54:13

Editing Status: Active
Exported: No

Access Categories

Write, Read, Value Help:	Restricted
Read, Value Help:	Unrestricted
Value Help:	Unrestricted

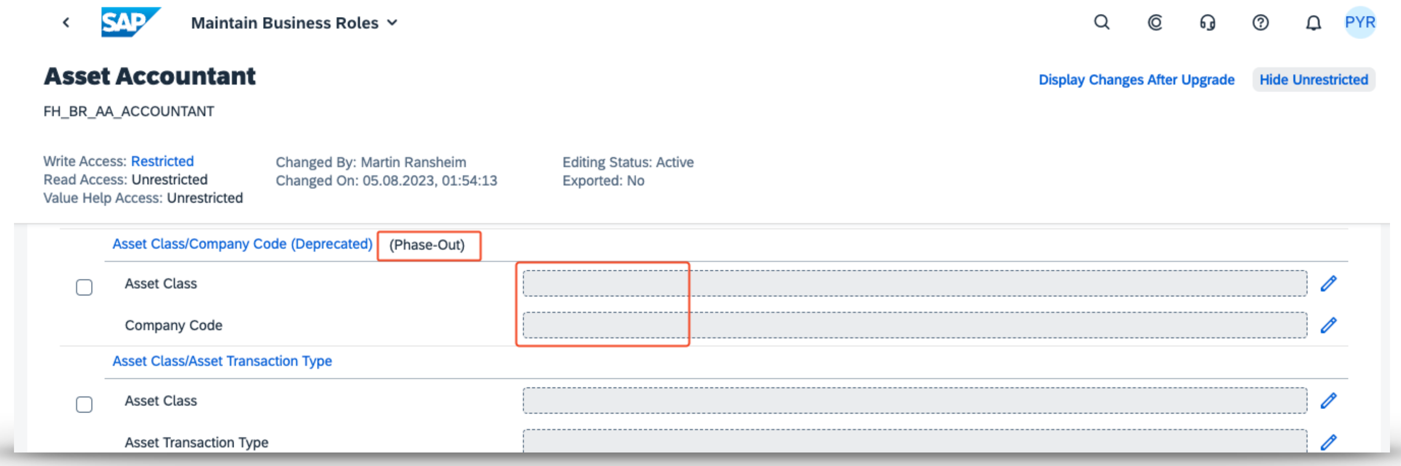
Others

Price Category:	Advanced
Business Role Template ID:	SAP_BR_AA_ACCOUNTANT
Leading Business Role ID:	
Is Leading Business Role:	□
Exposed to SAP BTP:	□

Let’s click on the navigation option (2) Display Restrictions (Deprecated).

Because the Write Access is restricted, we can see the various restrictions that are available. In this case we can see that for this phase out restriction, we had not maintained any values.

Note that you also have a seperate application named Display Restriction Types.



Maintain Business Roles

PYR

Asset Accountant

FH_BR_AA_ACCOUNTANT

Display Changes After Upgrade | Hide Unrestricted

Write Access: Restricted
Read Access: Unrestricted
Value Help Access: Unrestricted

Changed By: Martin Ransheim
Changed On: 05.08.2023, 01:54:13

Editing Status: Active
Exported: No

Asset Class/Company Code (Deprecated) (Phase-Out)

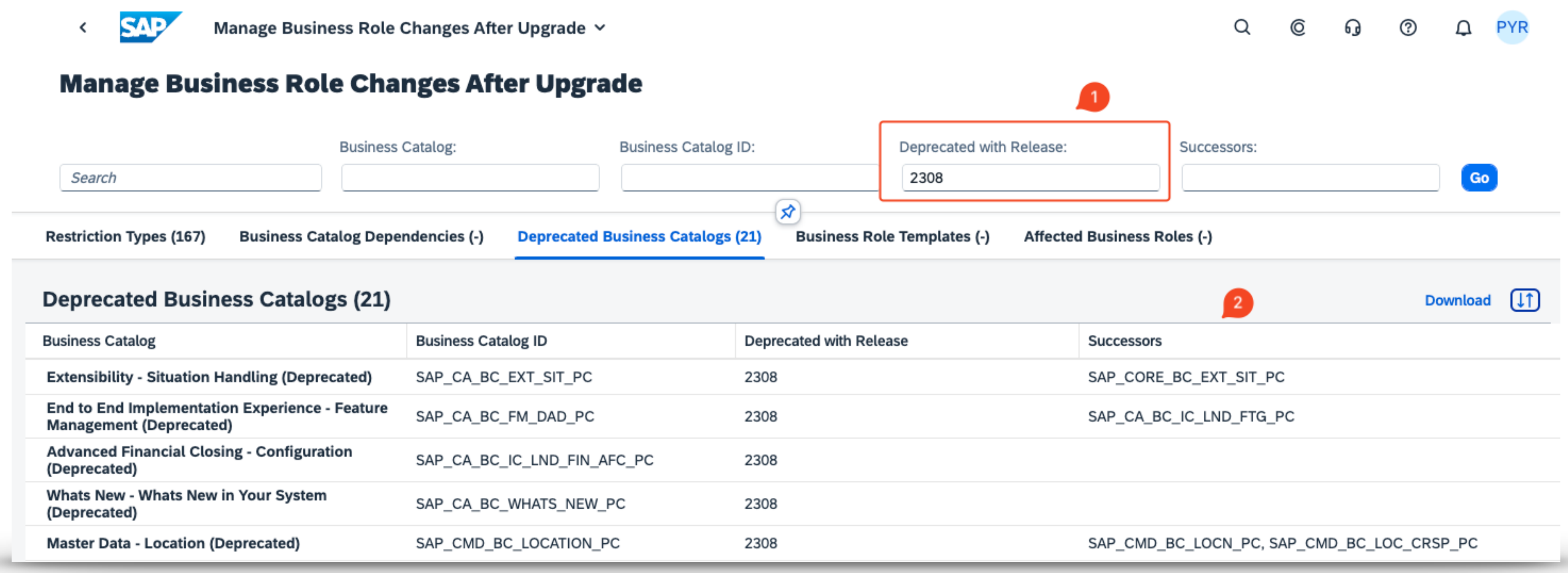
□ Asset Class
Company Code

Asset Class/Asset Transaction Type

□ Asset Class
Asset Transaction Type

Deprecated Business Catalogs

This tab title has the merit of being clear! It will show you business catalogs in use that are deprecated, and only that. If you have been staying on top of your business catalog deprecations, then you really should only be seeing the deprecations that were introduced during the last upgrade, but you can also use the filter Deprecated with Release (1) , if you want to focus on the deprecations of that specific release. Note that in the output list, we have that all familiar column named Successors (2) , which presents the Successor Business catalog(s).



Manage Business Role Changes After Upgrade

Search

Business Catalog:

Business Catalog ID:

Deprecated with Release: 2308

Successors:

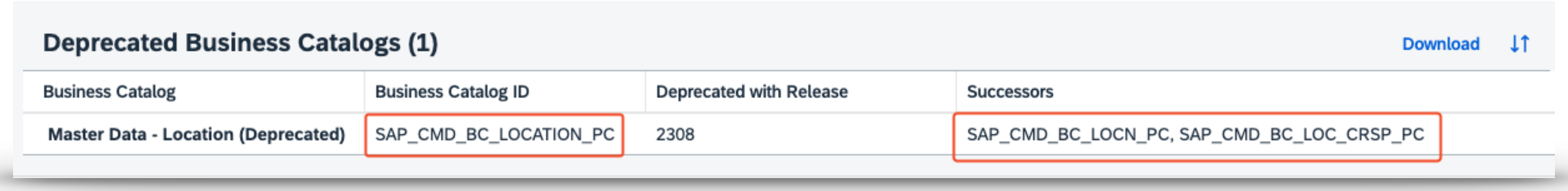
Go

Restriction Types (167) | Business Catalog Dependencies (-) | Deprecated Business Catalogs (21) | Business Role Templates (-) | Affected Business Roles (-)

Deprecated Business Catalogs (21)

Business Catalog	Business Catalog ID	Deprecated with Release	Successors
Extensibility - Situation Handling (Deprecated)	SAP_CA_BC_EXT_SIT_PC	2308	SAP_CORE_BC_EXT_SIT_PC
End to End Implementation Experience - Feature Management (Deprecated)	SAP_CA_BC_FM_DAD_PC	2308	SAP_CA_BC_IC_LND_FTG_PC
Advanced Financial Closing - Configuration (Deprecated)	SAP_CA_BC_IC_LND_FIN_AFC_PC	2308	
Whats New - Whats New in Your System (Deprecated)	SAP_CA_BC_WHATS_NEW_PC	2308	
Master Data - Location (Deprecated)	SAP_CMD_BC_LOCATION_PC	2308	SAP_CMD_BC_LOCN_PC, SAP_CMD_BC_LOC_CRSP_PC

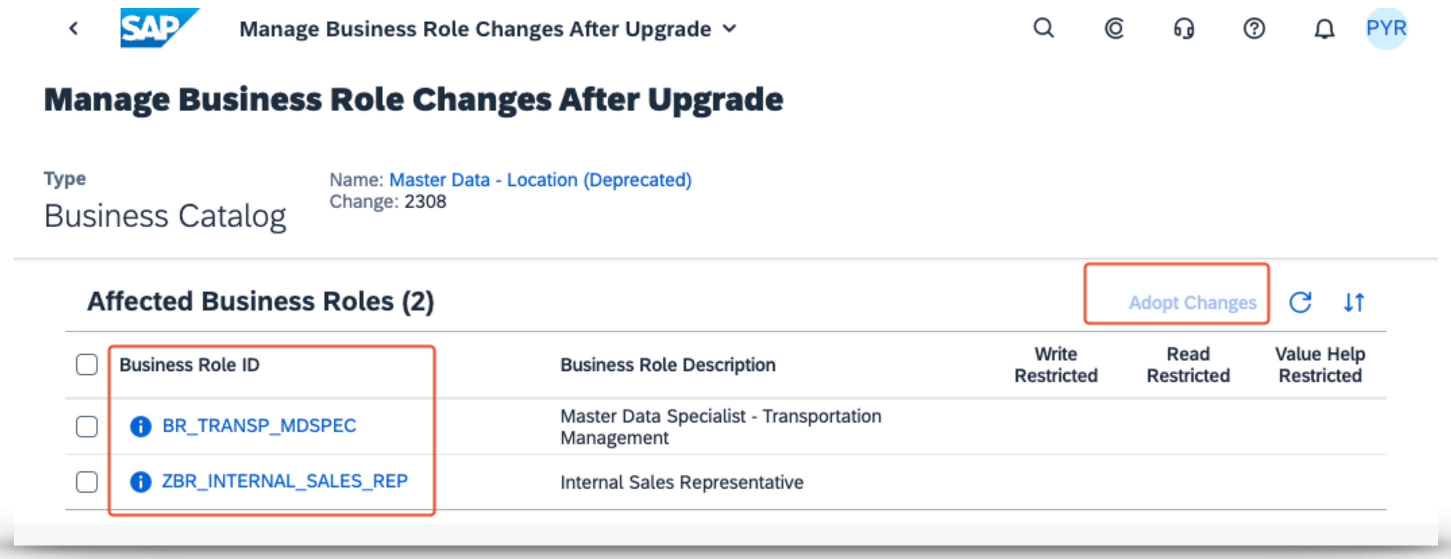
As usual, clicking on a particular line, will bring up the details of that business catalog. To illustrate our example, we will use the one shown below, which we can see has two successors.



Deprecated Business Catalogs (1)

Business Catalog	Business Catalog ID	Deprecated with Release	Successors
Master Data - Location (Deprecated)	SAP_CMD_BC_LOCATION_PC	2308	SAP_CMD_BC_LOCN_PC, SAP_CMD_BC_LOC_CRSP_PC

Once we reach the details screen, we are provided with the information that the deprecated catalog we chose, is used by two business roles. We also see an option to 'Adopt Changes' – meaning that we can perform the switch from the old deprecated catalog by removing it from the selected role(s) and replace it by adding the successor Business catalog(s) to it. So let's go ahead and try that.



Manage Business Role Changes After Upgrade

Type
Business Catalog

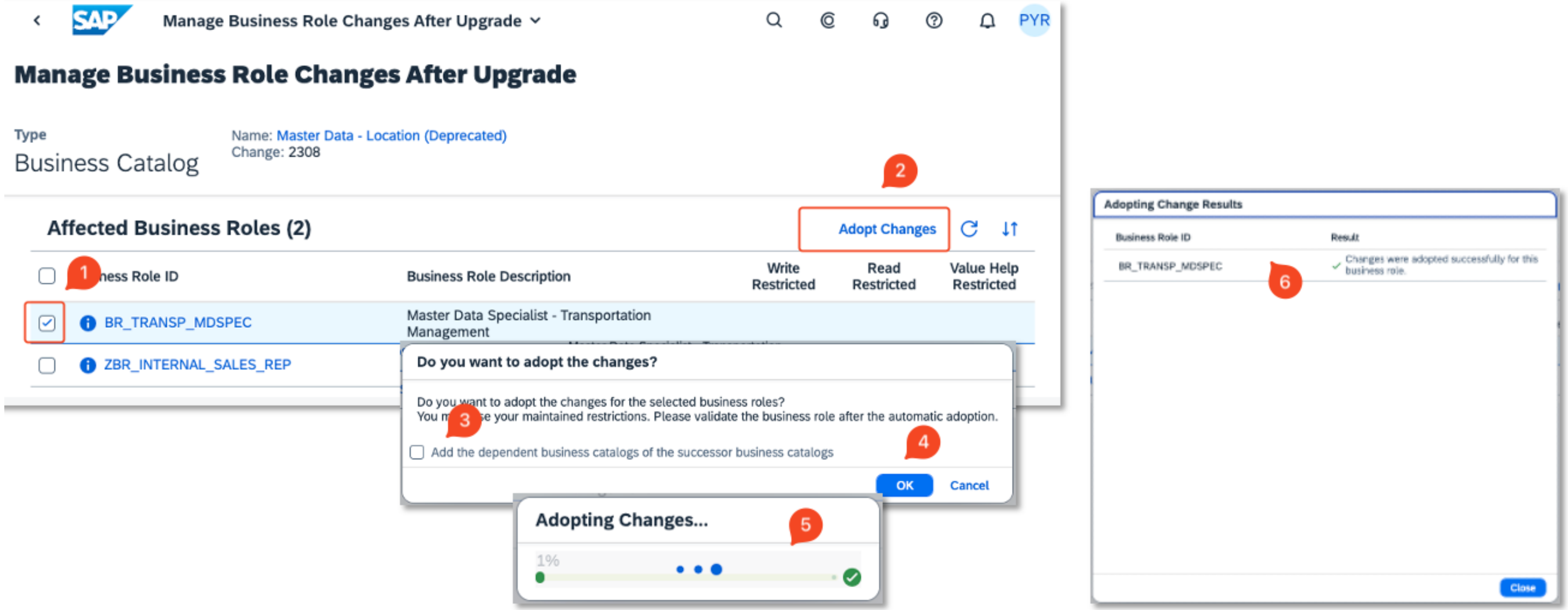
Name: Master Data - Location (Deprecated)
Change: 2308

Affected Business Roles (2)

☐	Business Role ID	Business Role Description	Write Restricted	Read Restricted	Value Help Restricted
☐	BR_TRANSP_MDSPEC	Master Data Specialist - Transportation Management			
☐	ZBR_INTERNAL_SALES_REP	Internal Sales Representative			

In terms of actions,

1. We selected the role(s) we wanted to adapt (1),
2. We clicked the Adopt Changes button (2),
3. A popup was displayed asking us to confirm our wish to perform the adoption during which we were proposed to also add the dependent business catalogs,
4. We clicked Ok (4) to validate the action to perform the change,
5. A progress window was displayed showing progress,
6. An end of adoption window was presented confirming the end of the adoption.



Manage Business Role Changes After Upgrade

Type
Business Catalog

Name: Master Data - Location (Deprecated)
Change: 2308

Affected Business Roles (2)

□	ness Role ID	Business Role Description	Write Restricted	Read Restricted	Value Help Restricted
☑	BR_TRANSP_MDSPEC	Master Data Specialist - Transportation Management			
□	ZBR_INTERNAL_SALES_REP				

Do you want to adopt the changes?

Do you want to adopt the changes for the selected business roles?
You m se your maintained restrictions. Please validate the business role after the automatic adoption.

□ Add the dependent business catalogs of the successor business catalogs

Adopting Changes...

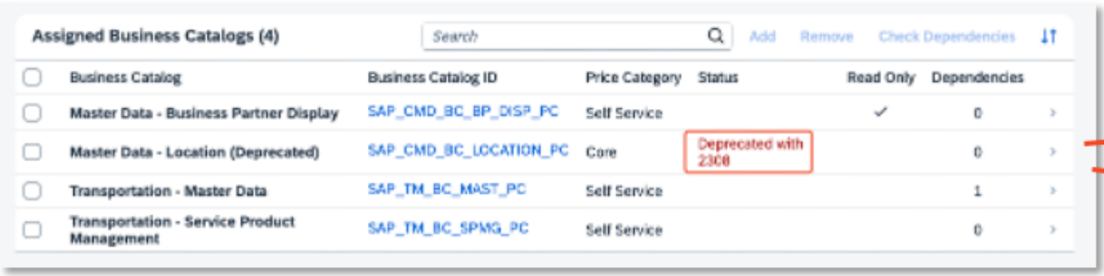
1%

Adopting Change Results

Business Role ID	Result
BR_TRANSP_MDSPEC	✓ Changes were adopted successfully for this business role.

If we also perform a Before and After adoption comparison of the business catalog(s) that were assigned to the role we just adapted, we can on the left see the presence of a deprecated catalog and after adoption on the right, we see not only that the deprecated catalog is no longer there, but that is has been replaced with two successor catalogs.

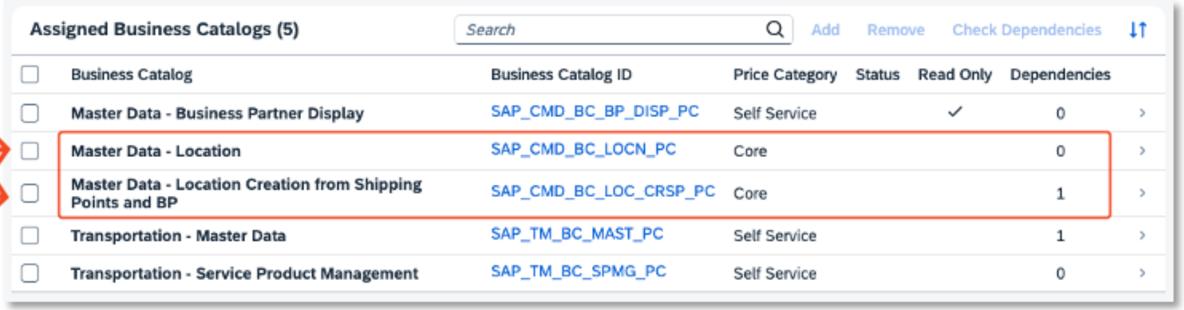
Before



Assigned Business Catalogs (4)

□	Business Catalog	Business Catalog ID	Price Category	Status	Read Only	Dependencies
□	Master Data - Business Partner Display	SAP_CMD_BC_BP_DISP_PC	Self Service		✓	0
□	Master Data - Location (Deprecated)	SAP_CMD_BC_LOCATION_PC	Core	Deprecated with 2308		0
□	Transportation - Master Data	SAP_TM_BC_MAST_PC	Self Service			1
□	Transportation - Service Product Management	SAP_TM_BC_SPMG_PC	Self Service			0

After



Assigned Business Catalogs (5)

□	Business Catalog	Business Catalog ID	Price Category	Status	Read Only	Dependencies
□	Master Data - Business Partner Display	SAP_CMD_BC_BP_DISP_PC	Self Service		✓	0
□	Master Data - Location	SAP_CMD_BC_LOCN_PC	Core			0
□	Master Data - Location Creation from Shipping Points and BP	SAP_CMD_BC_LOC_CRSP_PC	Core			1
□	Transportation - Master Data	SAP_TM_BC_MAST_PC	Self Service			1
□	Transportation - Service Product Management	SAP_TM_BC_SPMG_PC	Self Service			0

Please note, that whilst this process might seem expedient, please make sure that you have done your diligence with respect to dependent business catalogs, persistence of restriction values if applicable and assignment to Fiori pages.

Further Reading

SAP Learning | Managing Business Role Changes after Upgrade

SAP Help | Best Practices for Managing Business Role Changes After an Upgrade

SAP Help | How to Manage Business Role Changes After Upgrade

SAP Help | Phase-In / Phase-Out Status

SAP Support | Note 2975653 Identity and Access Management (IAM): Change Overview for SAP S/4HANA Cloud

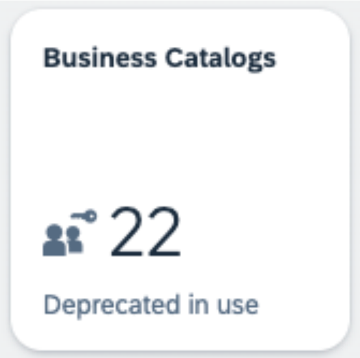
SAP Support | Note 3093696 - How to manage business role changes after system upgrade

Microlearning | Video How to Adapt Changes in Business Role in SAP S/4HANA Cloud, Public Edition

Microlearning | Video How to Manage Deprecated Business Catalogs in SAP S/4HANA Cloud, Public Edition

The Business Catalogs Application

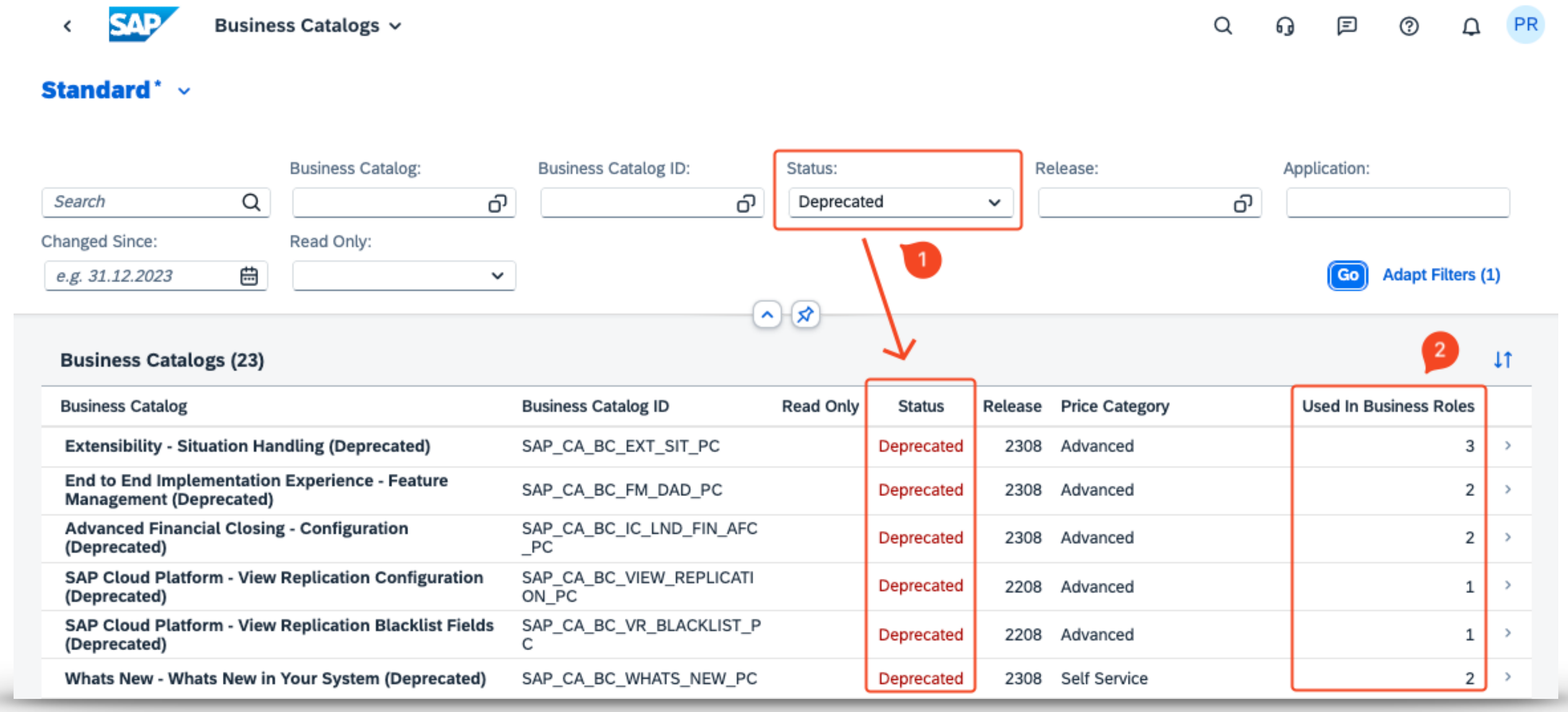
In the previous chapter we showed how you could process deprecated business catalogs via the Manage Business Role Changes after Upgrade application. You can however also use the Business Catalogs application directly to process a business catalog deprecation. In order to launch the application you need a business catalog such as `SAP_A4C_BC_IAM_DISP_PC`, `SAP_CORE_BC_IAM_RM`… assigned to a business role, assigned to your user. Already in the Fiori Launchpad, you can see the corresponding application tile, giving you an indication of the number of deprecated business catalogs used in your system. Launching the application will produce a list, such as the one below, for which you can use the filter Status (1) and the value Deprecated to limit the output to Deprecated business catalogs only. Of importance as well here, is the number of business roles that you have in your system that are using this deprecated business catalog (2).



Business Catalogs

22

Deprecated in use



Search

Business Catalog:

Business Catalog ID:

Status: Deprecated

Release:

Application:

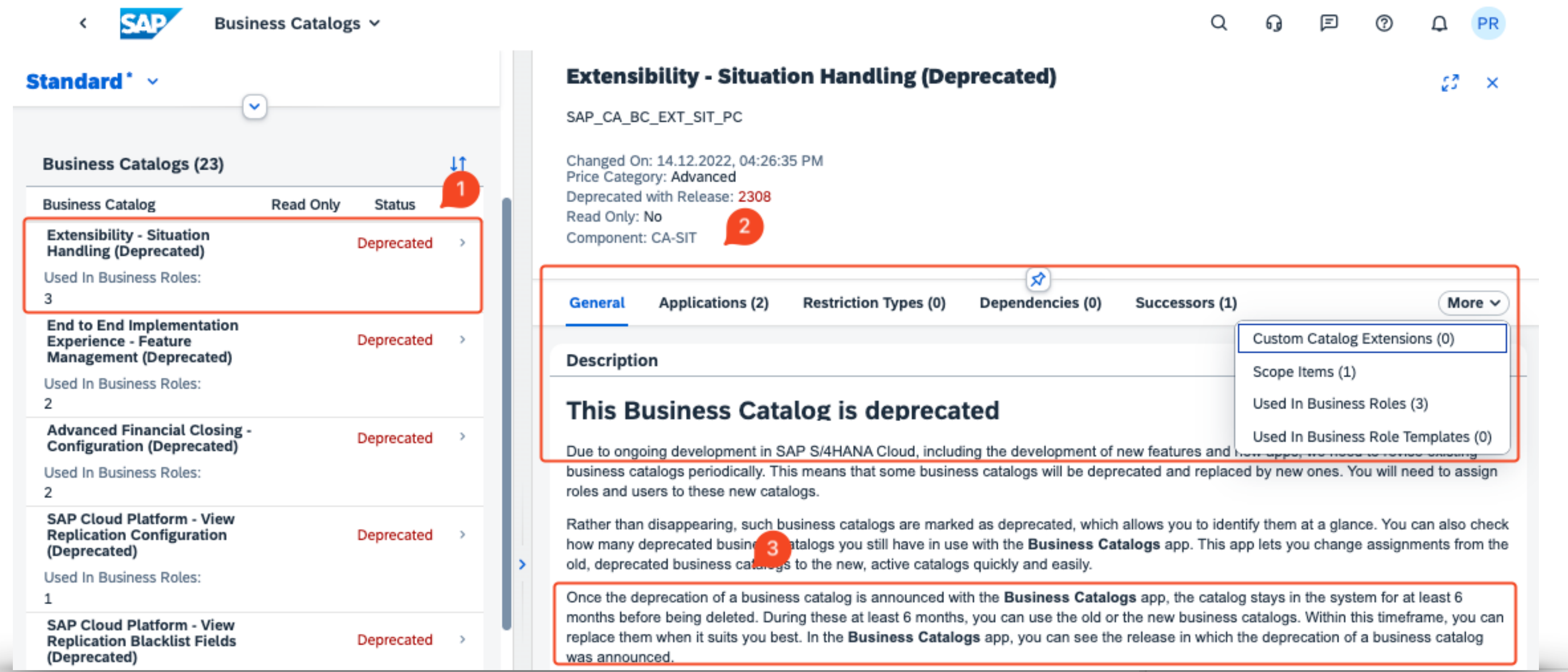
Changed Since: e.g. 31.12.2023

Read Only:

Business Catalogs (23)

Business Catalog	Business Catalog ID	Read Only	Status	Release	Price Category	Used In Business Roles
Extensibility - Situation Handling (Deprecated)	SAP_CA_BC_EXT_SIT_PC		Deprecated	2308	Advanced	3
End to End Implementation Experience - Feature Management (Deprecated)	SAP_CA_BC_FM_DAD_PC		Deprecated	2308	Advanced	2
Advanced Financial Closing - Configuration (Deprecated)	SAP_CA_BC_IC_LND_FIN_AFC_PC		Deprecated	2308	Advanced	2
SAP Cloud Platform - View Replication Configuration (Deprecated)	SAP_CA_BC_VIEW_REPLICATION_PC		Deprecated	2208	Advanced	1
SAP Cloud Platform - View Replication Blacklist Fields (Deprecated)	SAP_CA_BC_VR_BLACKLIST_PC		Deprecated	2208	Advanced	1
Whats New - Whats New in Your System (Deprecated)	SAP_CA_BC_WHATS_NEW_PC		Deprecated	2308	Self Service	2

As usual, clicking on a line will reveal details for the selection (1). We have in the right details pane a number of tabs (2) we can navigate to, and interestingly in this app you also have information pertaining to the deprecation policy of business catalogs. In the Successors tab (4), we can get information on the (5) Successor business catalog(s)



Business Catalogs (23)

Business Catalog	Read Only	Status
Extensibility - Situation Handling (Deprecated) Used In Business Roles: 3		Deprecated
End to End Implementation Experience - Feature Management (Deprecated) Used In Business Roles: 2		Deprecated
Advanced Financial Closing - Configuration (Deprecated) Used In Business Roles: 2		Deprecated
SAP Cloud Platform - View Replication Configuration (Deprecated) Used In Business Roles: 1		Deprecated
SAP Cloud Platform - View Replication Blacklist Fields (Deprecated)		Deprecated

Extensibility - Situation Handling (Deprecated)

SAP_CA_BC_EXT_SIT_PC

Changed On: 14.12.2022, 04:26:35 PM
Price Category: Advanced
Deprecated with Release: 2308
Read Only: No
Component: CA-SIT

General | Applications (2) | Restriction Types (0) | Dependencies (0) | Successors (1) | More

- Custom Catalog Extensions (0)
- Scope Items (1)
- Used In Business Roles (3)
- Used In Business Role Templates (0)

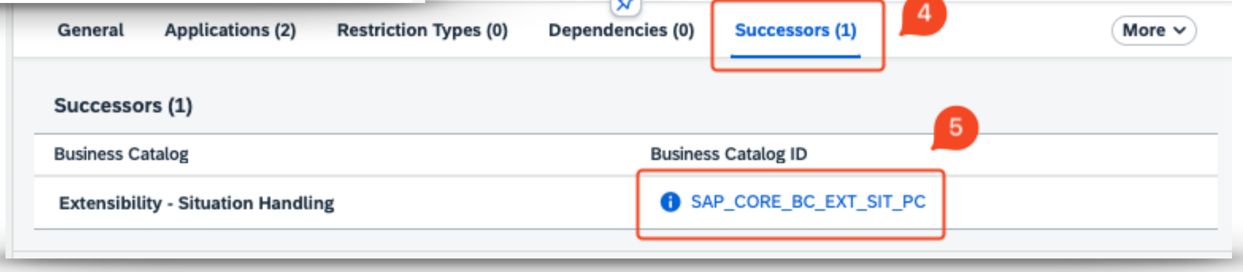
Description

This Business Catalog is deprecated

Due to ongoing development in SAP S/4HANA Cloud, including the development of new features and new apps, we need to revise existing business catalogs periodically. This means that some business catalogs will be deprecated and replaced by new ones. You will need to assign roles and users to these new catalogs.

Rather than disappearing, such business catalogs are marked as deprecated, which allows you to identify them at a glance. You can also check how many deprecated business catalogs you still have in use with the **Business Catalogs** app. This app lets you change assignments from the old, deprecated business catalogs to the new, active catalogs quickly and easily.

Once the deprecation of a business catalog is announced with the **Business Catalogs** app, the catalog stays in the system for at least 6 months before being deleted. During these at least 6 months, you can use the old or the new business catalogs. Within this timeframe, you can replace them when it suits you best. In the **Business Catalogs** app, you can see the release in which the deprecation of a business catalog was announced.

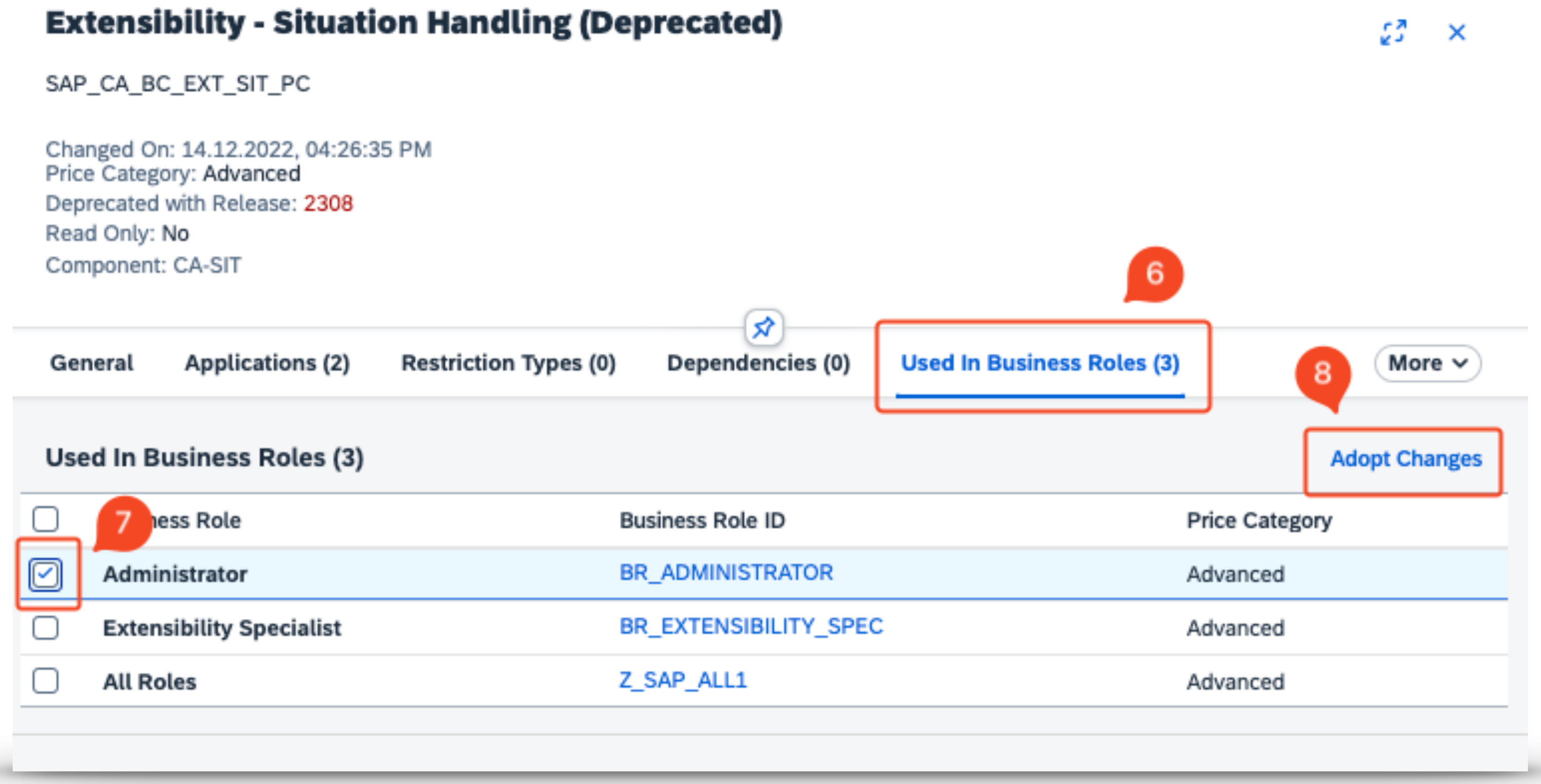


General | Applications (2) | Restriction Types (0) | Dependencies (0) | Successors (1) | More

Successors (1)

Business Catalog	Business Catalog ID
Extensibility - Situation Handling	SAP_CORE_BC_EXT_SIT_PC

To proceed and process the deprecation, i.e the removal of the deprecated business catalog(s), and the addition of the successor business catalog(s) to the business role(s) that make use of the deprecated business catalog(s), we need to go to the Used in Business Roles tab (6). Once there, as we did in the Manage Business Role changes after Upgrade application, we select the (7) business Role(s), that we want to adapt and then click the Adopt Changes (8) button. Just like in the Manage Business Role changes after Upgrade application, we will have the ability to add dependent business catalogs. Once the adaption is processed, if all went well, we will get a corresponding notification, and the list of Business roles adapted.



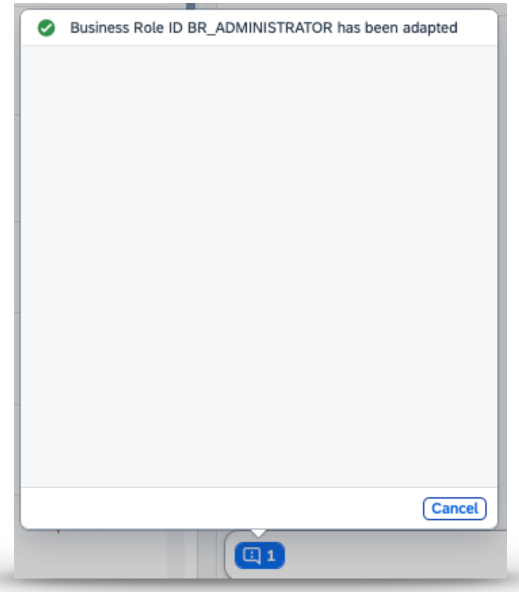
Extensibility - Situation Handling (Deprecated)

SAP_CA_BC_EXT_SIT_PC

Changed On: 14.12.2022, 04:26:35 PM
Price Category: Advanced
Deprecated with Release: 2308
Read Only: No
Component: CA-SIT

Used In Business Roles (3)

□	ness Role	Business Role ID	Price Category
☑	Administrator	BR_ADMINISTRATOR	Advanced
□	Extensibility Specialist	BR_EXTENSIBILITY_SPEC	Advanced
□	All Roles	Z_SAP_ALL1	Advanced

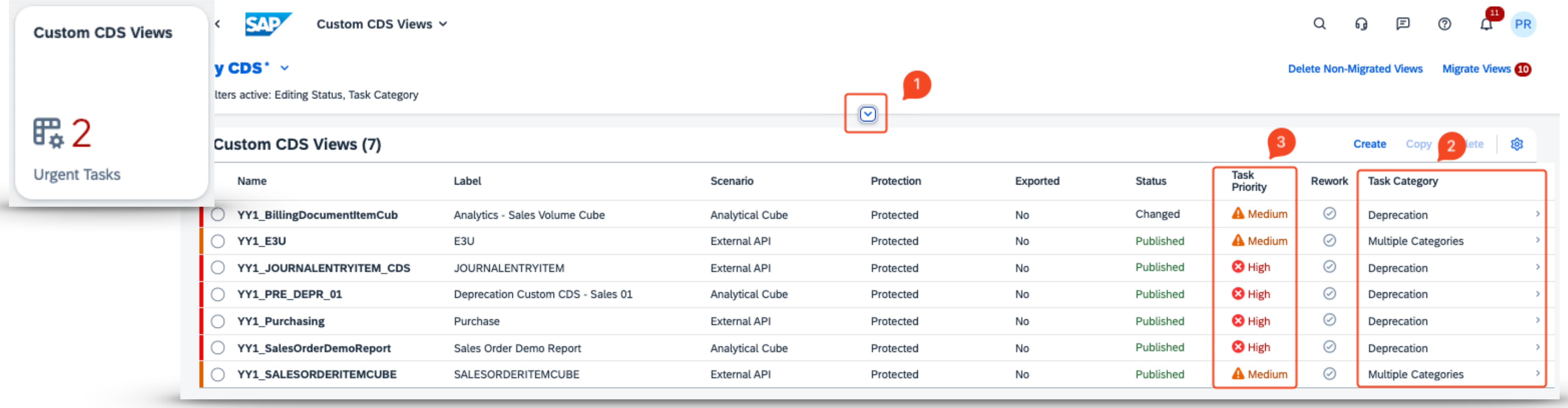


Business Role ID BR_ADMINISTRATOR has been adapted

The Custom CDS application

The Custom CDS app, is the key-user extensibility application to use to create Custom CDSs. In order to be able to use, you will need to have a business catalog such as `SAP_CORE_BC_EXT` or `SAP_CORE_BC_EXT_CCV` assigned to a business role, assigned to your user. We will in this section not cover it in great detail, as we will during the exploration of our use cases, make ample use of it.

Already on the Fiori Launchpad, you can see an indication of the number of urgent rework tasks that you need take care of. Note that this number represents only the urgent (High Priority) tasks, not ALL the tasks that need to be taken care of! Once the app opens, you can use the (1) filters and limit the result, so as to only see those CDSs that are the object of a deprecation (2 - Task Category), as well as the the priority (3) synonymous of the urgency.



Name	Label	Scenario	Protection	Exported	Status	Task Priority	Rework	Task Category
YY1_BillingDocumentItemCub	Analytics - Sales Volume Cube	Analytical Cube	Protected	No	Changed	⚠ Medium	✓	Deprecation
YY1_E3U	E3U	External API	Protected	No	Published	⚠ Medium	✓	Multiple Categories
YY1_JOURNALENTRYITEM_CDS	JOURNALENTRYITEM	External API	Protected	No	Published	⊗ High	✓	Deprecation
YY1_PRE_DEPR_01	Deprecation Custom CDS - Sales 01	Analytical Cube	Protected	No	Published	⊗ High	✓	Deprecation
YY1_Purchasing	Purchase	External API	Protected	No	Published	⊗ High	✓	Deprecation
YY1_SalesOrderDemoReport	Sales Order Demo Report	Analytical Cube	Protected	No	Published	⊗ High	✓	Deprecation
YY1_SALESORDERITEMCUBE	SALESORDERITEMCUBE	External API	Protected	No	Published	⚠ Medium	✓	Multiple Categories

Further Reading

As said, there will be ample opportunities to further explore the Custom CDS application when we delve into the deprecation uses cases. However, I would be remiss to not link here the excellent blogs written by Andreas Riehl available on SAP blogs. I would recommend you subscribe to his feed and be on the lookout for the blog that he produces at the time of each SAP S/4HANA Cloud upgrade.

SAP Blogs | Custom CDS View - What's new in 2105 (an oldie but Goldie!)

SAP Blogs | Custom CDS Views - FAQ

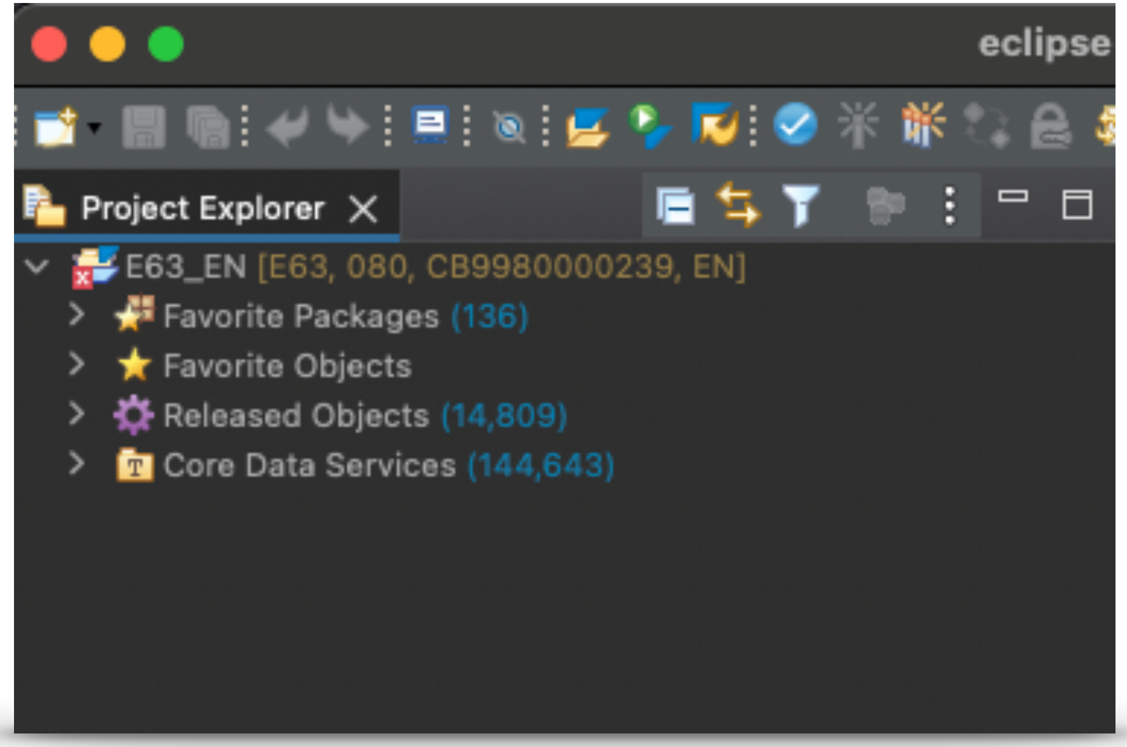
SAP Blogs | The all new Custom CDS Views App

SAP Tutorial | Create and Expose Custom CDS Views

Inside ADT (ABAP Developer Tools)

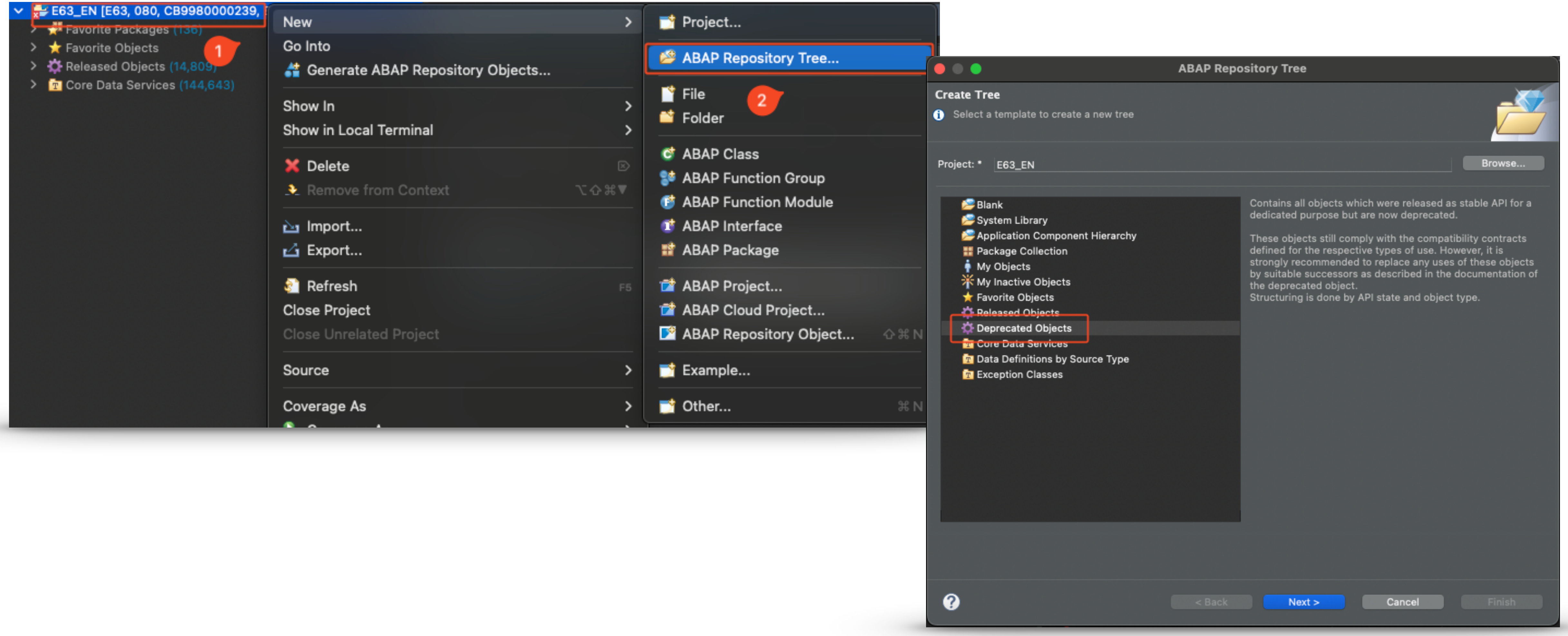
So far, when it came to in-system information we looked at what was available inside SAP S/4HANA Cloud and this is of course very valid in the context of Key User Extensibility. However with the advent of the 3 system landscape (3SL), came the introduction of Developer Extensibility. I.e with the addition of a Development client (as the name indicates dedicated to Development) added to your Development system, you now have access to ABAP Cloud and a fully fledged IDE (Integrated Development Environment). You might also have seen references to 'Embedded Steampunk'.

In this IDE, it is also possible to view deprecated objects, relevant to developer extensibility. It is assumed that you have created an ABAP Cloud Project, thus setting up the connection to the Development client of your development system, and you can thus in the Project Explorer pane view a hierarchy of objects that might look like the below. At the very top of the hierarchy, we see the 3 letter identifier of your development system, the client number (always 080), your CB* user and language.



E63_EN [E63, 080, CB9980000239, EN]
- Favorite Packages (136)
- Favorite Objects
- Released Objects (14,809)
- Core Data Services (144,643)

To view all deprecated objects, you can call a dedicated menu tree. To do so, right click (1) the top most node of the hierarchy (the one that corresponds to your system), then select New and select the ABAP Repository Tree menu (2). This will open a pop-up from which you will select the Deprecated Objects entry.



Create Tree

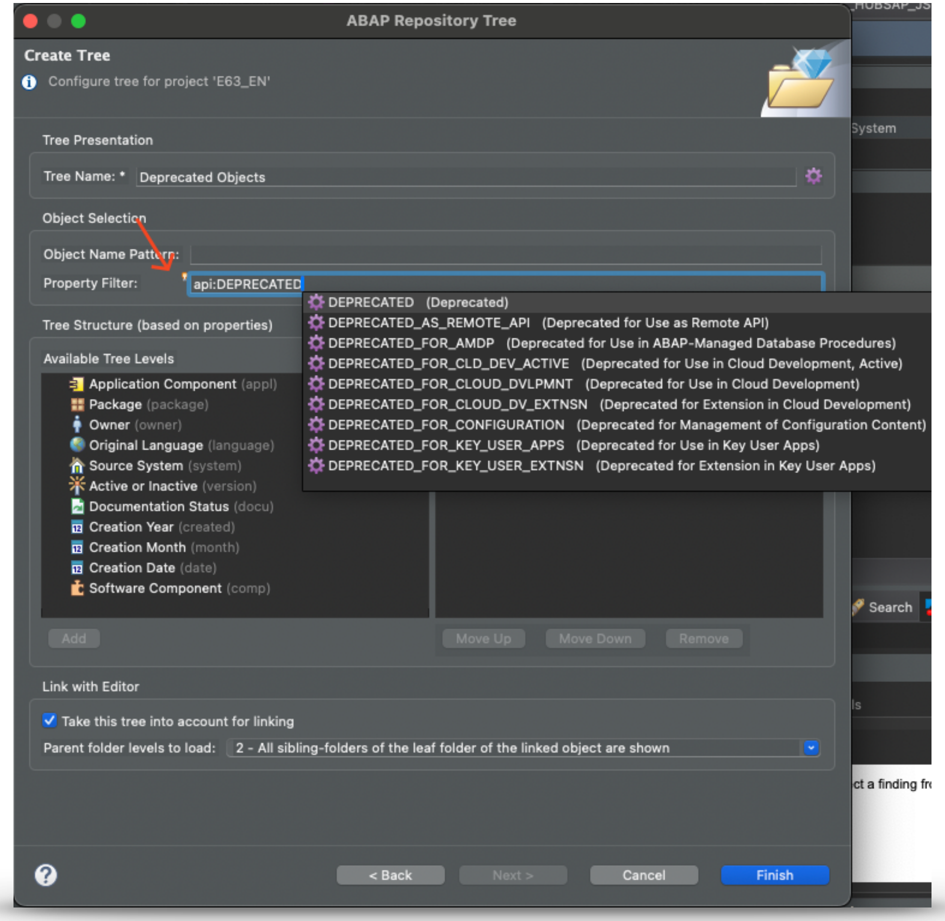
Select a template to create a new tree

Project: * E63_EN

Contains all objects which were released as stable API for a dedicated purpose but are now deprecated.

These objects still comply with the compatibility contracts defined for the respective types of use. However, it is strongly recommended to replace any uses of these objects by suitable successors as described in the documentation of the deprecated object.
Structuring is done by API state and object type.

In the next window, you will see the property filter to be defaulted to ALL deprecated objects `api:Deprecated`. You can however further restrict the list of deprecated objects and be specific to a kind of deprecation. To see the list of possible restricting values, simply use the keystrokes Ctrl + Space to reveal the additional values. Once you have made a selection, and clicked finish, a new tree will appear in your project explorer, showing the deprecated objects you asked to see. You can also find more information on this here in the SAP Help.



ABAP Repository Tree

Create Tree

Configure tree for project 'E63_EN'

Tree Presentation

Tree Name: * Deprecated Objects

Object Selection

Object Name Pattern:

Property Filter: api:DEPRECATED

- DEPRECATED (Deprecated)
- DEPRECATED_AS_REMOTE_API (Deprecated for Use as Remote API)
- DEPRECATED_FOR_AMDP (Deprecated for Use in ABAP-Managed Database Procedures)
- DEPRECATED_FOR_CLD_DEV_ACTIVE (Deprecated for Use in Cloud Development, Active)
- DEPRECATED_FOR_CLOUD_DVLPMNT (Deprecated for Use in Cloud Development)
- DEPRECATED_FOR_CLOUD_DV_EXTNSN (Deprecated for Extension in Cloud Development)
- DEPRECATED_FOR_CONFIGURATION (Deprecated for Management of Configuration Content)
- DEPRECATED_FOR_KEY_USER_APPS (Deprecated for Use in Key User Apps)
- DEPRECATED_FOR_KEY_USER_EXTNSN (Deprecated for Extension in Key User Apps)

Tree Structure (based on properties)

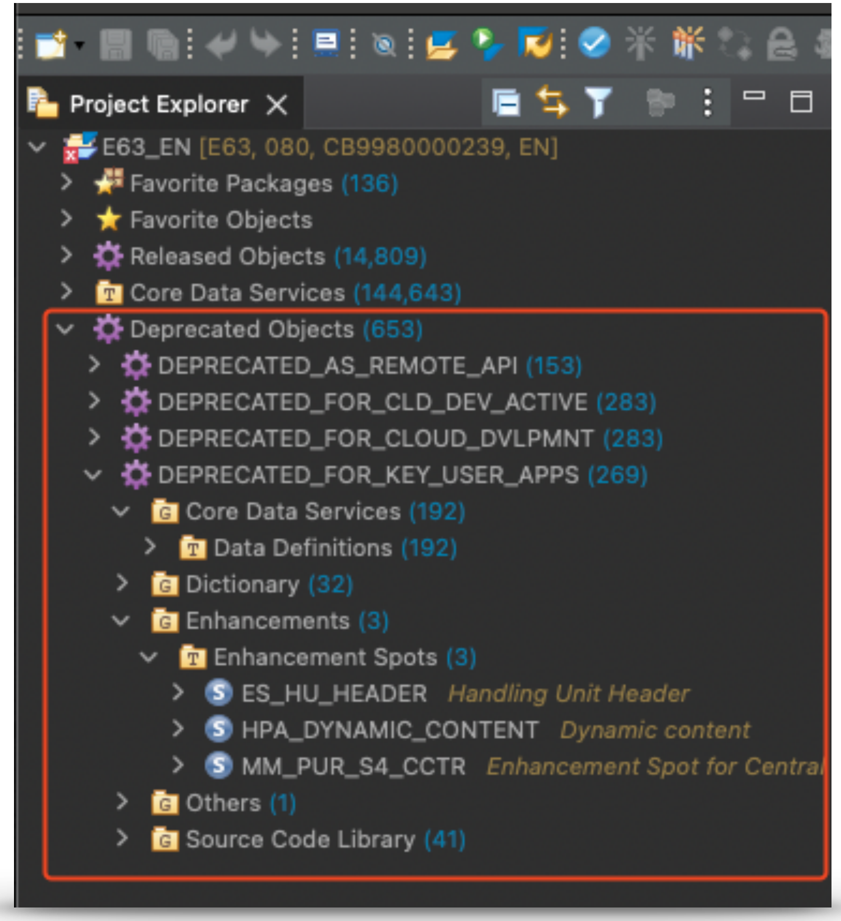
Available Tree Levels

- Application Component (appl)
- Package (package)
- Owner (owner)
- Original Language (language)
- Source System (system)
- Active or Inactive (version)
- Documentation Status (docu)
- Creation Year (created)
- Creation Month (month)
- Creation Date (date)
- Software Component (comp)

Link with Editor

☑ Take this tree into account for linking

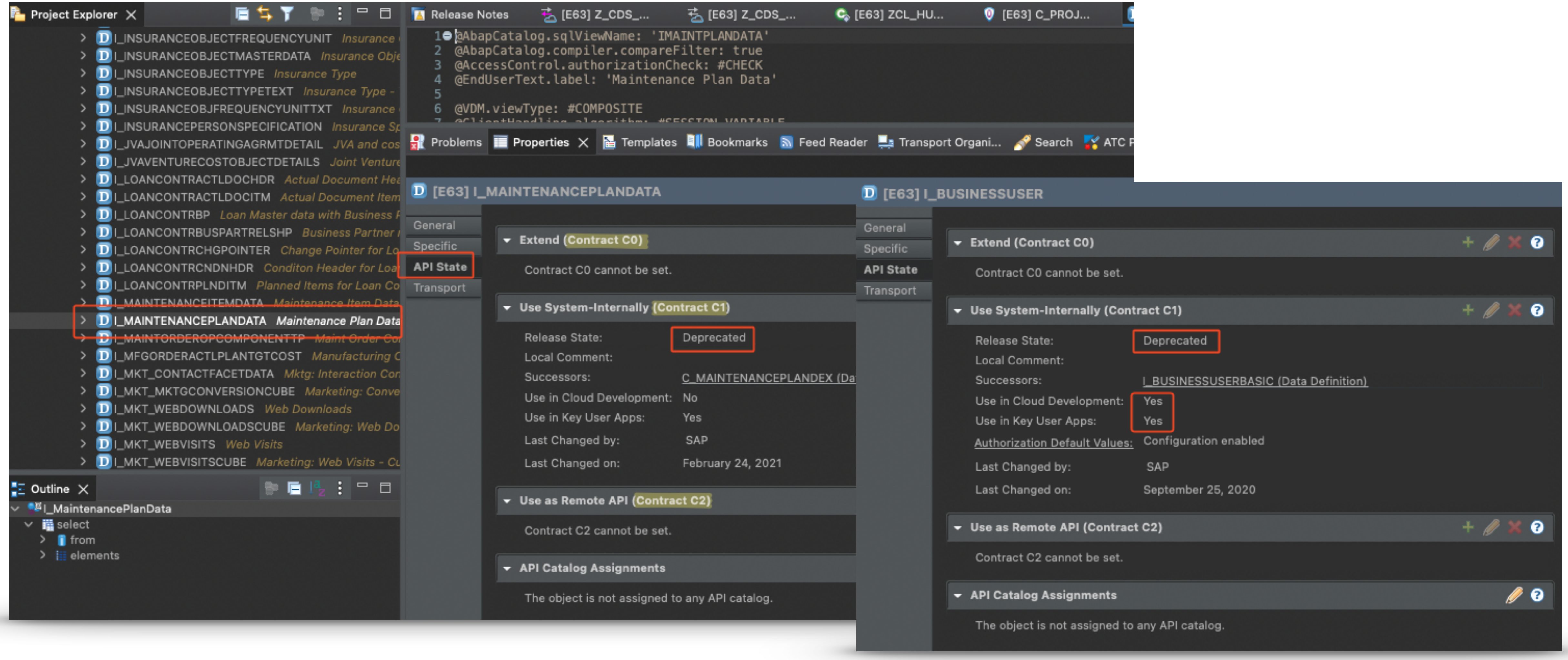
Parent folder levels to load: 2 - All sibling-folders of the leaf folder of the linked object are shown



Project Explorer

- E63_EN [E63, 080, CB9980000239, EN]
  - Favorite Packages (136)
  - Favorite Objects
  - Released Objects (14,809)
  - Core Data Services (144,643)
  - Deprecated Objects (653)
    - DEPRECATED_AS_REMOTE_API (153)
    - DEPRECATED_FOR_CLD_DEV_ACTIVE (283)
    - DEPRECATED_FOR_CLOUD_DVLPMNT (283)
    - DEPRECATED_FOR_KEY_USER_APPS (269)
      - Core Data Services (192)
        - Data Definitions (192)
      - Dictionary (32)
      - Enhancements (3)
        - Enhancement Spots (3)
          - ES_HU_HEADER *Handling Unit Header*
          - HPA_DYNAMIC_CONTENT *Dynamic content*
          - MM_PUR_S4_CCTR *Enhancement Spot for Centra*
      - Others (1)
      - Source Code Library (41)

Lastly, note that independent of this menu tree, you can check the state of an object, by looking at into the API State tab in the Properties view. You can find more information on the stability contracts (C0, C1, C2) in the SAP help here.



I_INSURANCEOBJECTFREQUENCYUNIT Insurance
I_INSURANCEOBJECTMASTERDATA Insurance Obje
I_INSURANCEOBJECTTYPE Insurance Type
I_INSURANCEOBJECTTYPETEXT Insurance Type -
I_INSURANCEOBJFREQUENCYUNITTXT Insurance
I_INSURANCEPERSONSPECIFICATION Insurance Sp
I_JVAJOINTOPERATINGAGRMTDETAIL JVA and cos
I_JVAVENTURECOSTOBJECTDETAILS Joint Venture
I_LOANCONTRACTLDOCHDR Actual Document Hea
I_LOANCONTRACTLDOCITM Actual Document Item
I_LOANCONTRBP Loan Master data with Business P
I_LOANCONTRBUSPARTRELSHP Business Partner r
I_LOANCONTRCHGPOINTER Change Pointer for Lo
I_LOANCONTRCNDNHDR Conditon Header for Loa
I_LOANCONTRPLNDITM Planned Items for Loan Co
I_MAINTENANCEITEMDATA Maintenance Item Data
I_MAINTENANCEPLANDATA Maintenance Plan Data
I_MAINTORDEROPCOMPONENTTP Maint Order Co
I_MFGORDERACTLPLANTGTCOST Manufacturing C
I_MKT_CONTACTFACETDATA Mktg: Interaction Cor
I_MKT_MKTGCONVERSIONCUBE Marketing: Conve
I_MKT_WEBDOWNLOADS Web Downloads
I_MKT_WEBDOWNLOADSCUBE Marketing: Web Do
I_MKT_WEBVISITS Web Visits
I_MKT_WEBVISITSCUBE Marketing: Web Visits - Cu

I_MaintenancePlanData
select
from
elements

```
@AbapCatalog.sqlViewName: 'IMAINTPLANDATA'
@AbapCatalog.compiler.compareFilter: true
@AccessControl.authorizationCheck: #CHECK
@EndUserText.label: 'Maintenance Plan Data'

@VDM.viewType: #COMPOSITE
@ClientHandling.algorithm: #SESSION_VARIABLE
```

[E63] I_MAINTENANCEPLANDATA

Extend (Contract C0)

Contract C0 cannot be set.

Use System-Internally (Contract C1)

Release State: Deprecated
Local Comment:
Successors: C_MAINTENANCEPLANDEX (Da
Use in Cloud Development: No
Use in Key User Apps: Yes
Last Changed by: SAP
Last Changed on: February 24, 2021

Use as Remote API (Contract C2)

Contract C2 cannot be set.

API Catalog Assignments

The object is not assigned to any API catalog.

[E63] I_BUSINESSUSER

Extend (Contract C0)

Contract C0 cannot be set.

Use System-Internally (Contract C1)

Release State: Deprecated
Local Comment:
Successors: I_BUSINESSUSERBASIC (Data Definition)
Use in Cloud Development: Yes
Use in Key User Apps: Yes
Authorization Default Values: Configuration enabled
Last Changed by: SAP
Last Changed on: September 25, 2020

Use as Remote API (Contract C2)

Contract C2 cannot be set.

API Catalog Assignments

The object is not assigned to any API catalog.

CDS Deprecations In Practice

Up until now, we have glossed over deprecations in general. In this section here, we will focus in detail on CDS deprecations.

When dealing with -CDS- deprecations, the kind and extent of changes that you will need to perform will depend on the kind of deprecation you are looking at (i.e one or more deprecated CDS fields within a still released CDS entity or/and an entire deprecated CDS entity) and the extent to which you have made use of the deprecated object(s) (do you have a complex stack of CDSs, was your custom CDS exposed as an API, was it used in a custom analytical query, in an embedded SAC story, etc...).

Whilst it would be impossible to cover each and every kind of scenario affected by a CDS related deprecation, we will, via two uses cases, *propose* a workflow to process the deprecation of CDS entities and CDS elements, when exposed as external APIs or used within a business user reporting capabilities (query report and eSAC story).

Whatever the case may be, planning is key! Below are a few bullet points that you may want to consider, before diving head first into changing things!

- Is your object used productively?
  - The more objects you have to change, the longer the change and testing process will be. You have to know that once you start to chaneg existing objects in the development client, you can no longer cater to changes for production to happen in parallel (e.g a business user suddenly realises that a calculated field is providing incorrect results and wants it changed),
  - If the object is already available in the production client and actively used, then extra care must be taken to ensure the changes will not cause regressions and careful before/after change comparisons made at every step of the change process,
  - If you are not an expert in the data or area (finance, supply chain..) being manipulated/affected by the change, ask an informed business user to validate that at the end of the changes the data presented is still correct/as expected (especially if you are for example using things such as calculation elements or calculated measures),
  - Plan with the impacted people / systems the time at which changes will be pushed into production to monitor for potential errors that 'slipped through the cracks',
  - To avoid impacting business users more than necessary, can you plan these changes in concert with other changes (e.g. incorporate a backlog of requested changes, rolling out a new functionality, re-design of business roles…) ,
- How extensively is your object used?
  - Make sure you have 100% visibility and knowledge of how the objects you are about to change are used (as we will see later on, there is room for omissions to occur, that will leave you with objects that do not function - correctly or at all - anymore. For example you could change a Custom CDS, but forget to change the associated eSAC story that uses that custom CDS),
  - Is it easier to change your existing objects, or is it simpler to create brand new objects?
- Is your Custom CDS exposed as an external API?

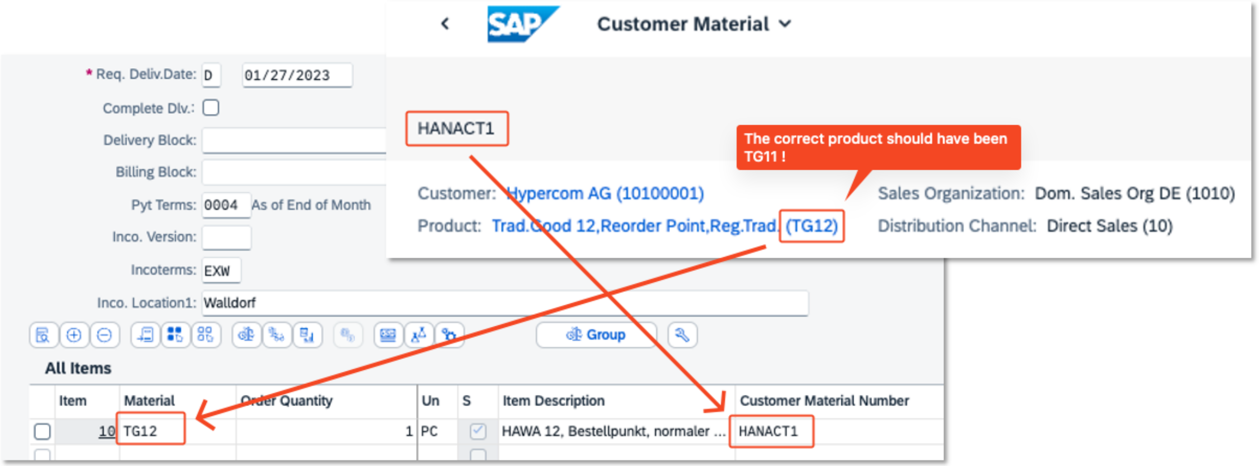
  - Are the changes you are going to make, going to affect the 3rd party application(s) that call your API? For example, are you going to remove or add or amend (change data format) or rename fields? If, yes, then clearly you need to plan and execute these changes not just in your SAP S/4HANA Cloud system, but also in the 3rd party applications so that they can parse incoming payloads,
  - If you have several 3rd party applications, will you able to execute the changes in all 3rd party systems at the same time? If no, what does that mean? Do you need to delay the roll out of the changes until such a time when all 3rd party applications can be changed, or does that mean that you need to create a new API so as to have some 3rd party application on one API, and some remain on the still unchanged API a little longer? But if you create a new API, then the URL endpoint will also change and thus also bring about additional changes,
- Is your change going to require some change management or re-training of business users?
  - Are your changes susceptible to causing issues or confusion with your business users (for example, will the field names shown on the UI change? How will the users react to this? Are previously saved report variants not going to work anymore, will you need to update user manuals…). Be ahead of this and plan on mitigating any impact to the business users - at a minimum, communicate,
- How often is your object used?
  - You have to know and plan for the day / time when you will roll out the changes to your production client. I.e do the business users use this report multiple times during a day, every day vs maybe some report that is only required 2-3 days at the end of the month? Or is the custom CDS exposed as an external API used every 5 minutes vs used once at the end of the day?
  - Inform the business users / technical integration users of incoming changes.

Introduction to the use case 1 - Analytical CDS

Setting the scene

To work through a deprecation process, we have devised the following hypothetical storyline:

In our demo organisation we are using Sales and Distribution sales orders to sell products, but we have also been using Customer Material info records to store the Customer Material ID to facilitate the customer ordering process, as well as order data such as minimum deliver quantities, delivery tolerances, etc.. Having received complaints and refund requests due to incorrect product deliveries, we were able to identify that the root cause of the problem was that the Customer Material info records we had created incorrectly linked the customer material ID to our products. We then decided to create a reporting capability that would allow us, after correction of our Customer Material info records, to identify these erroneous orders including order information. Sensing this was not a one time need, we decided to provide business users with a self-serve reporting capability they could use as and when they needed it.



Customer Material

HANACT1

The correct product should have been TG11 !

Customer: Hypercom AG (10100001)

Product: Trad.Good 12,Reorder Point,Reg.Trad. (TG12)

Sales Organization: Dom. Sales Org DE (1010)

Distribution Channel: Direct Sales (10)

* Req. Deliv.Date: D 01/27/2023

Complete Dlv.: □

Delivery Block:

Billing Block:

Pyt Terms: 0004 As of End of Month

Inco. Version:

Incoterms: EXW

Inco. Location1: Walldorf

All Items

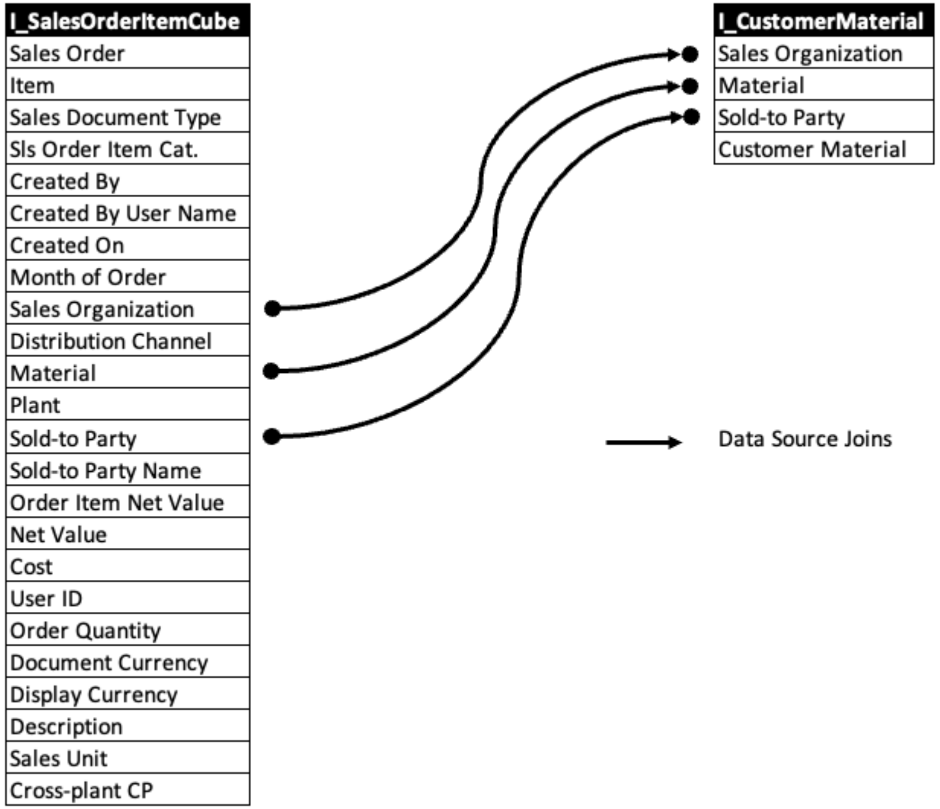
	Item	Material	Order Quantity	Un	S	Item Description	Customer Material Number
□	10	TG12	1	PC	☑	HAWA 12, Bestellpunkt, normaler ...	HANACT1

Orders were incorrectly created as a result of wrong Product to Customer Material associations.

At the time of the requirement, based on the intended end-use of this reporting (analytical query and embedded SAC story) a custom CDS, with the scenario Analytical Cube was created, by joining together two CDSs that provided all the required data. These CDSs were:

- **`I_SalesOrderItemCube`** - Sales Order Item - Cube, which provided us with sales order item data, and
- **`I_CustomerMaterial`** - Customer Material Information, which provided us with the customer material ID.

The diagram below shows which fields were selected as Elements to be on the reporting cube and/or used to join the two CDSs together.

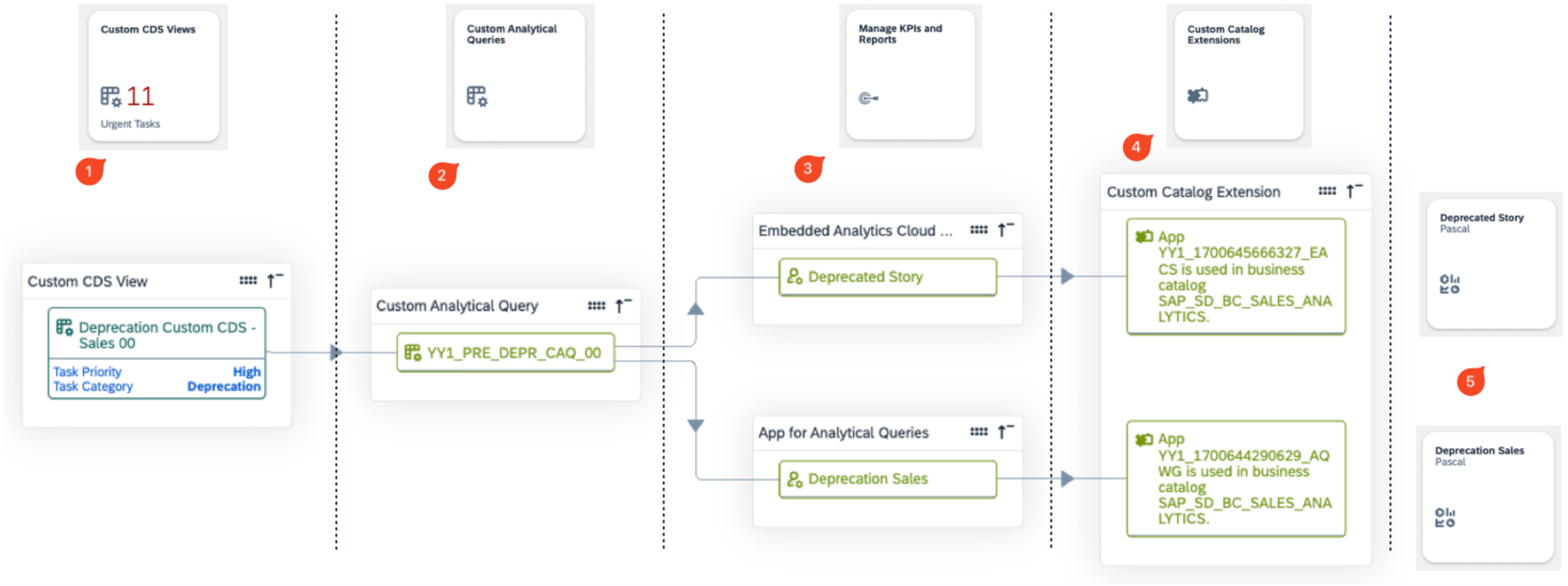


I_SalesOrderItemCube
Sales Order
Item
Sales Document Type
Sls Order Item Cat.
Created By
Created By User Name
Created On
Month of Order
Sales Organization
Distribution Channel
Material
Plant
Sold-to Party
Sold-to Party Name
Order Item Net Value
Net Value
Cost
User ID
Order Quantity
Document Currency
Display Currency
Description
Sales Unit
Cross-plant CP

I_CustomerMaterial
Sales Organization
Material
Sold-to Party
Customer Material

The diagram below, shows the workflow we adopted to produce the required reporting capability:

1. We used the Custom CDS views app to create the base of our reporting pyramid
2. We used the Custom Analytical Queries app to create a query
3. We used the Managed KPIs and Reports app to, based on our previously create analytical query, create a multi dimensional report and an eSAC story
4. Lastly we published the report and eSAC story to a business catalogs
5. The report and eSAC story were exposed as tiles on the users' launchpads.



App YY1_1700645666327_EACS is used in business catalog SAP_SD_BC_SALES_ANALYTICS.

App YY1_1700644290629_AQWG is used in business catalog SAP_SD_BC_SALES_ANALYTICS.

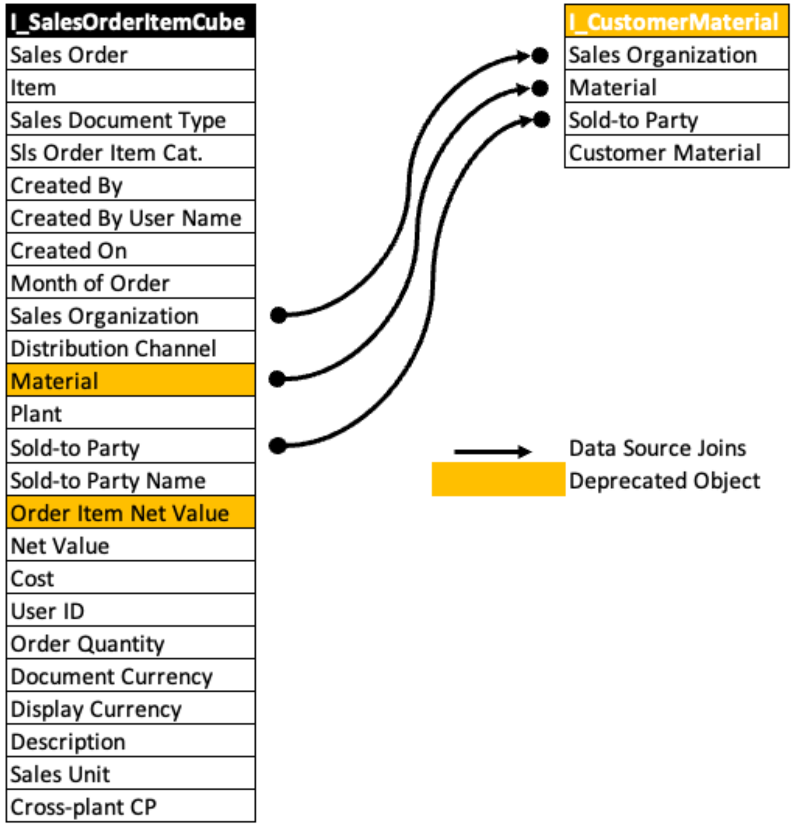
Processing the CDS Deprecation

The deprecation announcement

Having in the previous chapter set the scene for our scenario, we now fast forward to a hypothetical upgrade of SAP S/4HANA Cloud, public edition and we have taken the time to take stock of the various announcements that go with such an event, and in particular the advertised deprecations. Being responsible for 'Analytics and Reporting' we have with interest looked at the deprecations of CDS entities and CDS fields. We have done our initial due diligence:

- We have looked at the What's New viewer and filtered the data to look at deprecations of CDSs only,
- We have looked at the RASD tool, to get a usage specific view of how the announced deprecations directly affect us, based on our actual usage of the deprecated CDS announcements, and it has advised us that our custom CDS View `YY1_PRE_DEPR_00` is impacted by a deprecation
- We have an understanding of the Deprecation Policy of CDSs, and we know that the Deprecated CDS will still reside in our system for at least the next 12 months - this gives us time to plan and execute this deprecation.
- We have decided that we will change the existing objects, rather than create new ones.

The diagram on the right, for the sake of setting the scene, shows how the deprecation announcements affect our Custom CDS. In one CDS entity, we have two deprecated fields, and the other CDS entity we use is completely deprecated.



I_SalesOrderItemCube
Sales Order
Item
Sales Document Type
Sls Order Item Cat.
Created By
Created By User Name
Created On
Month of Order
Sales Organization
Distribution Channel
Material
Plant
Sold-to Party
Sold-to Party Name
Order Item Net Value
Net Value
Cost
User ID
Order Quantity
Document Currency
Display Currency
Description
Sales Unit
Cross-plant CP

I_CustomerMaterial
Sales Organization
Material
Sold-to Party
Customer Material

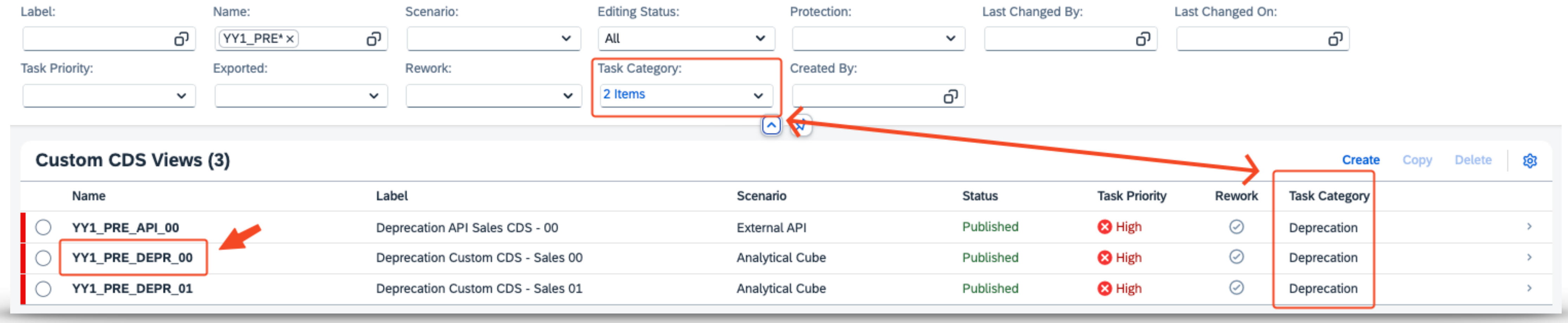
→ Data Source Joins

🟧 Deprecated Object

Understanding the size of the rework

We know the name of the custom CDS that is impacted by the deprecation announcements, but as we have quite a substantial reporting stack, just knowing the name of the CDS does not allow us to judge how much rework this will require, so to understand this we need to get on the system, plus we also want to double check that we have not missed anything.

We launch the Custom CDS view application and we amend the filters, so as to output only those custom CDS entities that are affected by a deprecation. We quickly identify the Custom CDS(s) in our area of responsibility, and in particular the one that caught our attention when looking at the RASD tool.



Label:
Name: YY1_PRE* ×
Scenario:
Editing Status: All
Protection:
Last Changed By:
Last Changed On:
Task Priority:
Exported:
Rework:
Task Category: 2 Items
Created By:

Custom CDS Views (3)

Name	Label	Scenario	Status	Task Priority	Rework	Task Category
YY1_PRE_API_00	Deprecation API Sales CDS - 00	External API	Published	⊗ High	✓	Deprecation
YY1_PRE_DEPR_00	Deprecation Custom CDS - Sales 00	Analytical Cube	Published	⊗ High	✓	Deprecation
YY1_PRE_DEPR_01	Deprecation Custom CDS - Sales 01	Analytical Cube	Published	⊗ High	✓	Deprecation

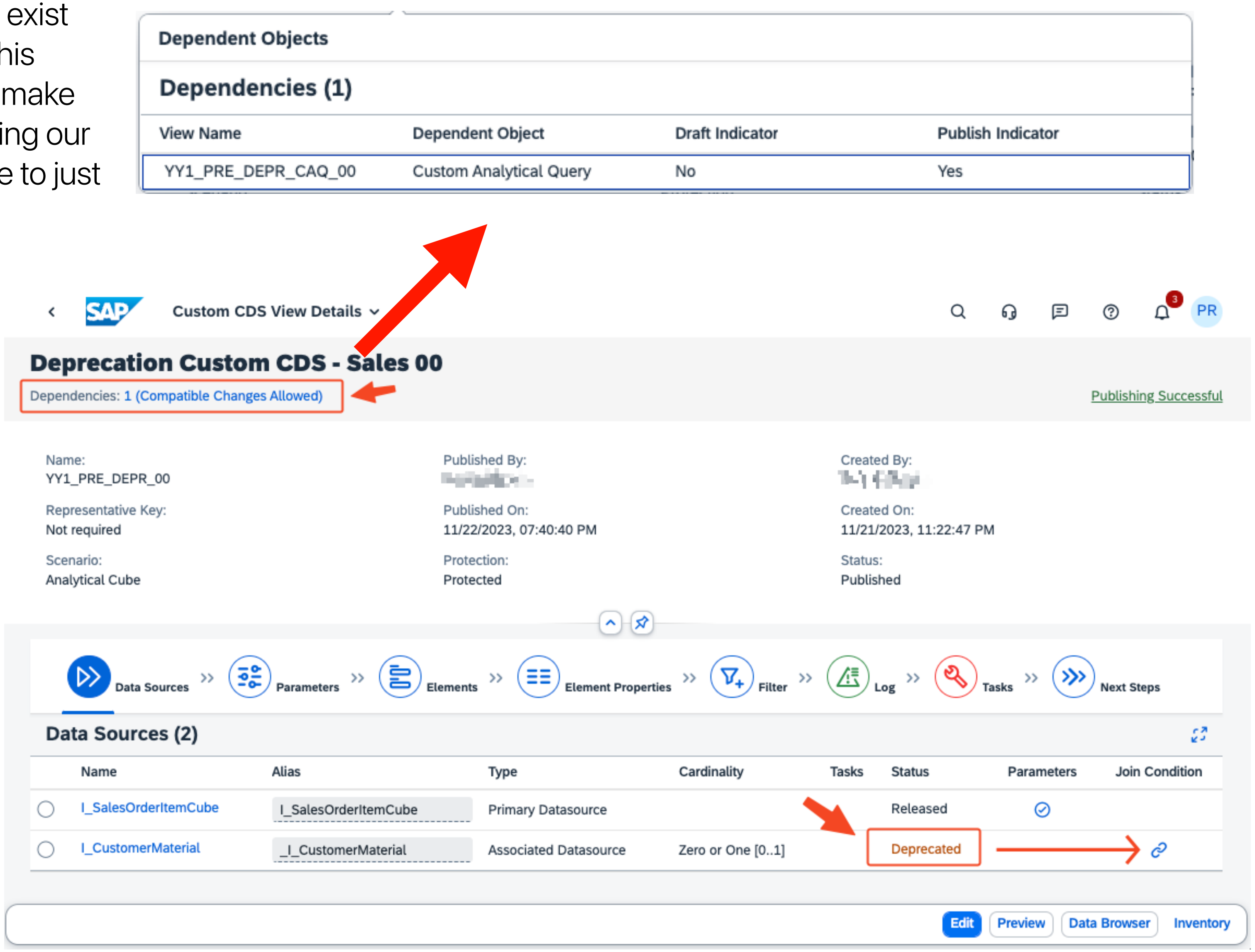
We click on the line, that corresponds to our Custom CDS, to get more details about it.

As soon as we get into the detail screen of the custom CDS, there are already a number of call-outs that attract our attention.

We have in the top left an indication that Dependencies exist and Compatible changes are allowed. This means that this custom CDS is used by another object and we can only make changes that will not affect or break the object that is using our custom CDS. For example, you would not want to be able to just delete a field from your custom CDS, if it was used by an analytical query!

Clicking on the hyperlink titled (Compatible Changes Allowed), will open a pop-up window showing you the actual name and object type of the object(s) that use the custom CDS

Further down, in the list of Data Sources, we can see that the SAP Standard CDS `I_CustomerMaterial` has the status of Deprecated. We also note that since this CDS is used in an association, we will also need to re-visit the join conditions.



Dependent Objects

Dependencies (1)

View Name	Dependent Object	Draft Indicator	Publish Indicator
YY1_PRE_DEPR_CAQ_00	Custom Analytical Query	No	Yes

Deprecation Custom CDS - Sales 00

Dependencies: 1 (Compatible Changes Allowed)

Publishing Successful

Name:
YY1_PRE_DEPR_00

Representative Key:
Not required

Scenario:
Analytical Cube

Published By:
[redacted]

Published On:
11/22/2023, 07:40:40 PM

Protection:
Protected

Created By:
[redacted]

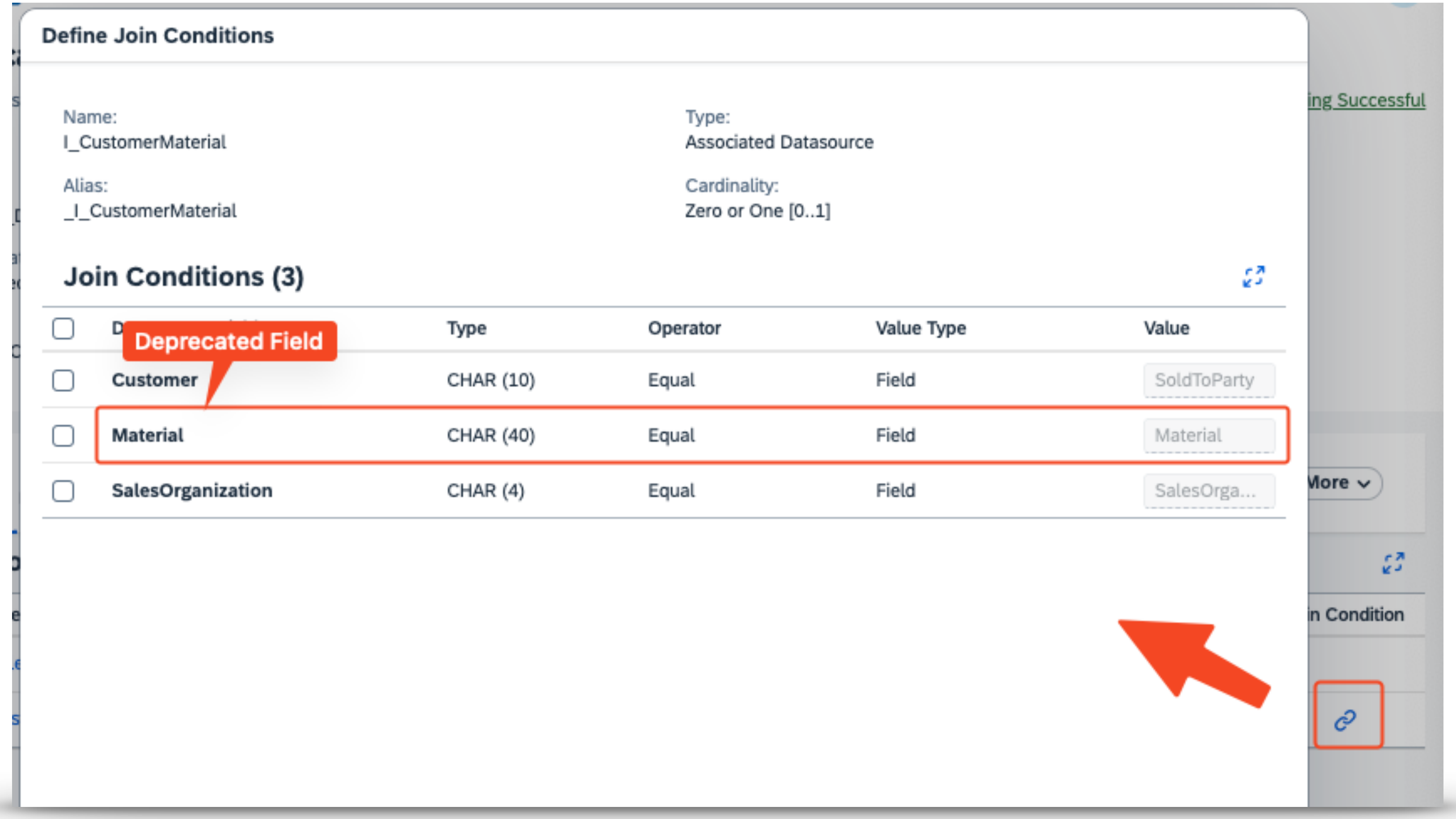
Created On:
11/21/2023, 11:22:47 PM

Status:
Published

Data Sources (2)

Name	Alias	Type	Cardinality	Tasks	Status	Parameters	Join Condition
I_SalesOrderItemCube	I_SalesOrderItemCube	Primary Datasource			Released	✓	
I_CustomerMaterial	_I_CustomerMaterial	Associated Datasource	Zero or One [0..1]		Deprecated		🔗

We can also click on the join (chain) icon to see how our two data sources are joined together. We see that three fields are used to join the data sources, and one of those fields is the field `Material`, which is deprecated but note that this is not indicated. We make a note that we will need to correct this as well.



Define Join Conditions

Name:
I_CustomerMaterial

Type:
Associated Datasource

Alias:
_I_CustomerMaterial

Cardinality:
Zero or One [0..1]

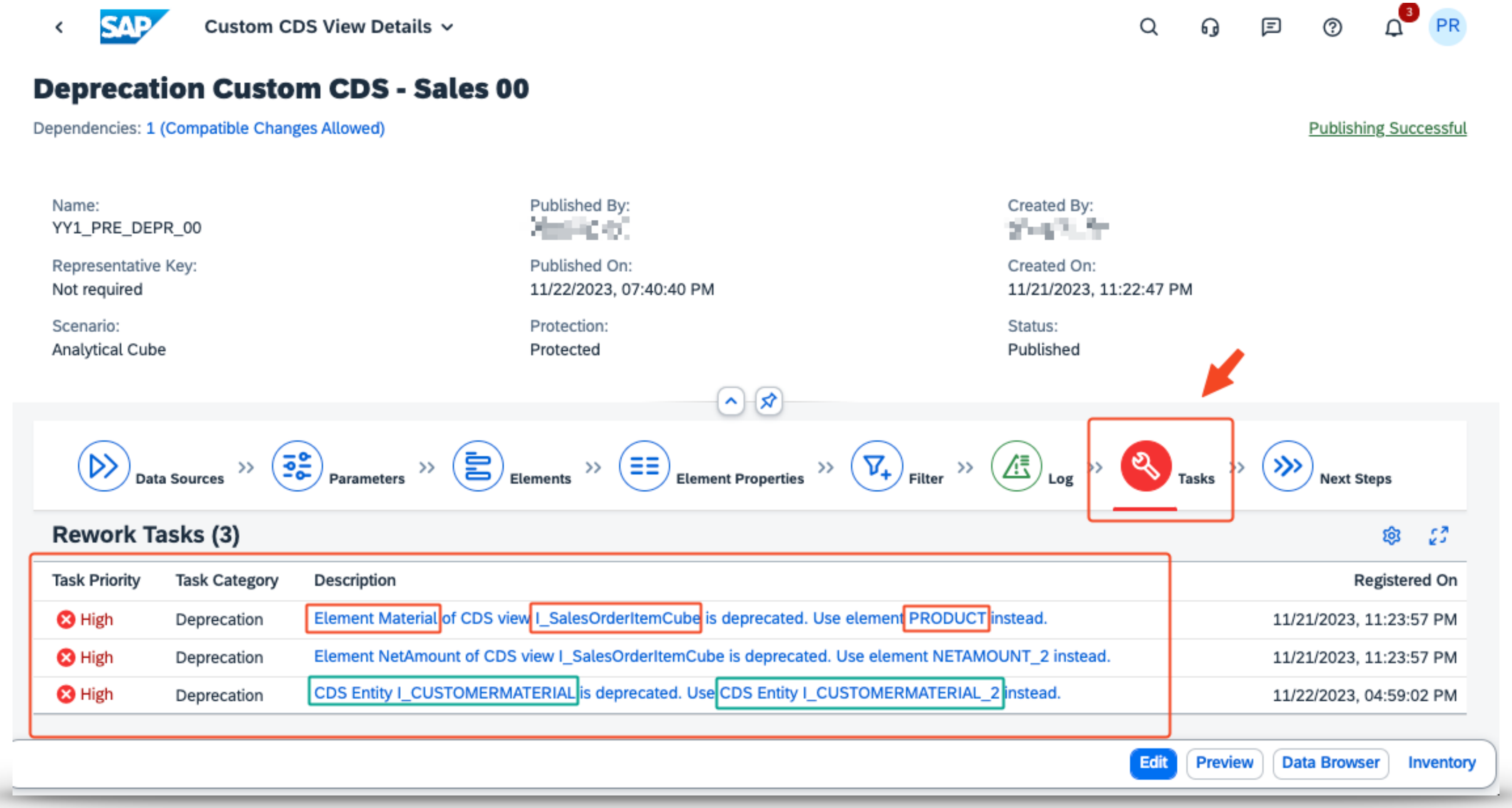
Join Conditions (3)

□	D	Type	Operator	Value Type	Value
□	Customer	CHAR (10)	Equal	Field	SoldToParty
□	Material	CHAR (40)	Equal	Field	Material
□	SalesOrganization	CHAR (4)	Equal	Field	SalesOrga...

Deprecated Field

We then move on to the Tasks tab, and in the Rework Tasks section, get more prescriptive information, clearly telling us what is deprecated as well as the successor object(s). Note that in this case we have rework tasks that pertain to CDS elements, as well as a complete CDS entity.

Another thing that is important, is that whilst we know what has been deprecated, the message is not telling us where the deprecated object(s) are used! I.e are we using deprecated objects as a join condition and/or filter condition and/or a displayed element and/or a calculation! As we shall see later on this is important, as not all checks are automated!



Deprecation Custom CDS - Sales 00

Dependencies: 1 (Compatible Changes Allowed)

Publishing Successful

Name: YY1_PRE_DEPR_00

Published By: [redacted]

Created By: [redacted]

Representative Key: Not required

Published On: 11/22/2023, 07:40:40 PM

Created On: 11/21/2023, 11:22:47 PM

Scenario: Analytical Cube

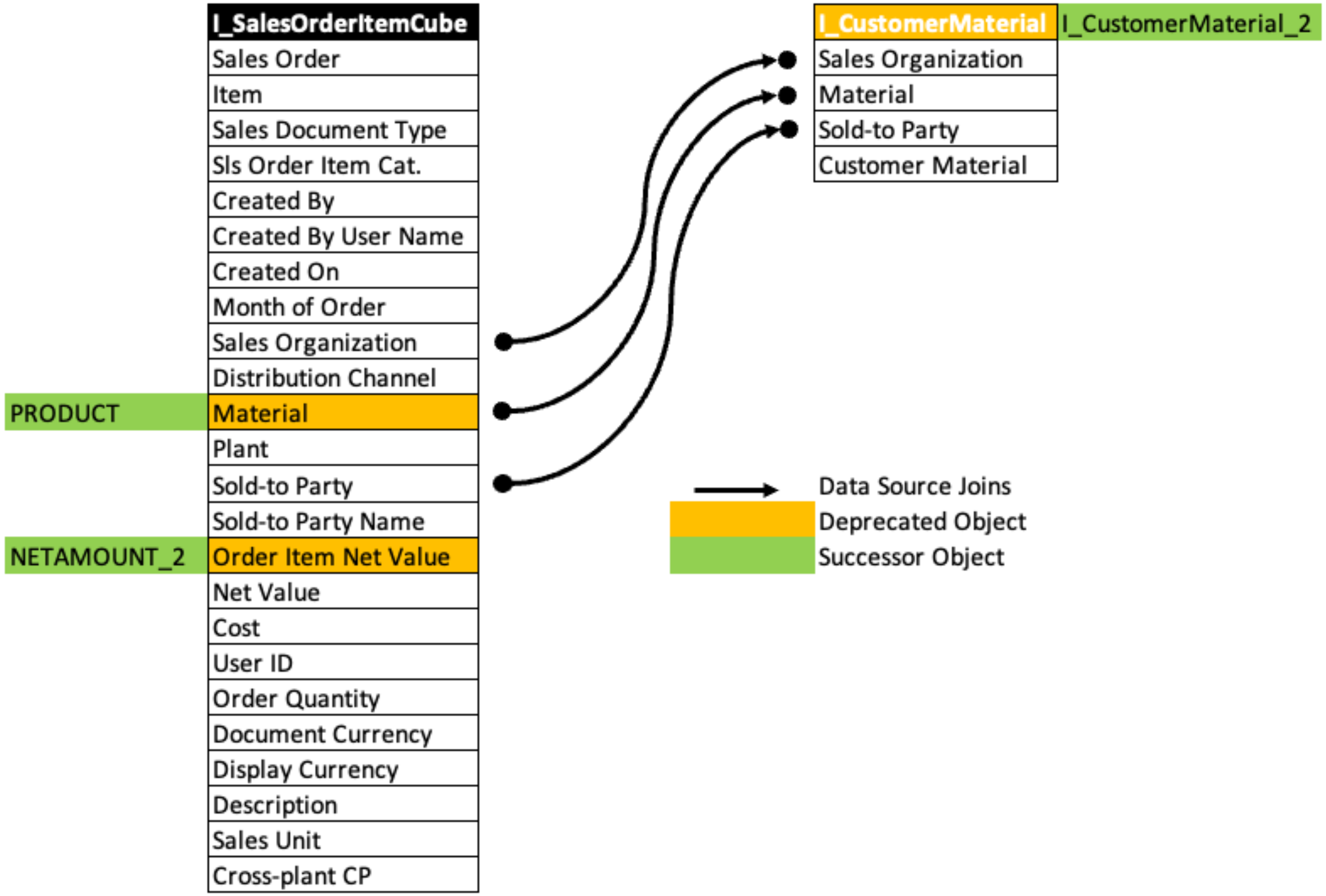
Protection: Protected

Status: Published

Rework Tasks (3)

Task Priority	Task Category	Description	Registered On
High	Deprecation	Element Material of CDS view I_SalesOrderItemCube is deprecated. Use element PRODUCT instead.	11/21/2023, 11:23:57 PM
High	Deprecation	Element NetAmount of CDS view I_SalesOrderItemCube is deprecated. Use element NETAMOUNT_2 instead.	11/21/2023, 11:23:57 PM
High	Deprecation	CDS Entity I_CUSTOMERMATERIAL is deprecated. Use CDS Entity I_CUSTOMERMATERIAL_2 instead.	11/22/2023, 04:59:02 PM

On the basis of the information found in the Tasks tab, we can update our Custom CDS data schema, and add to it the Successor information we have now confirmed. Next to the deprecated objects, we have added the successor information.



	I_SalesOrderItemCube
	Sales Order
	Item
	Sales Document Type
	Sls Order Item Cat.
	Created By
	Created By User Name
	Created On
	Month of Order
	Sales Organization
	Distribution Channel
PRODUCT	Material
	Plant
	Sold-to Party
	Sold-to Party Name
NETAMOUNT_2	Order Item Net Value
	Net Value
	Cost
	User ID
	Order Quantity
	Document Currency
	Display Currency
	Description
	Sales Unit
	Cross-plant CP

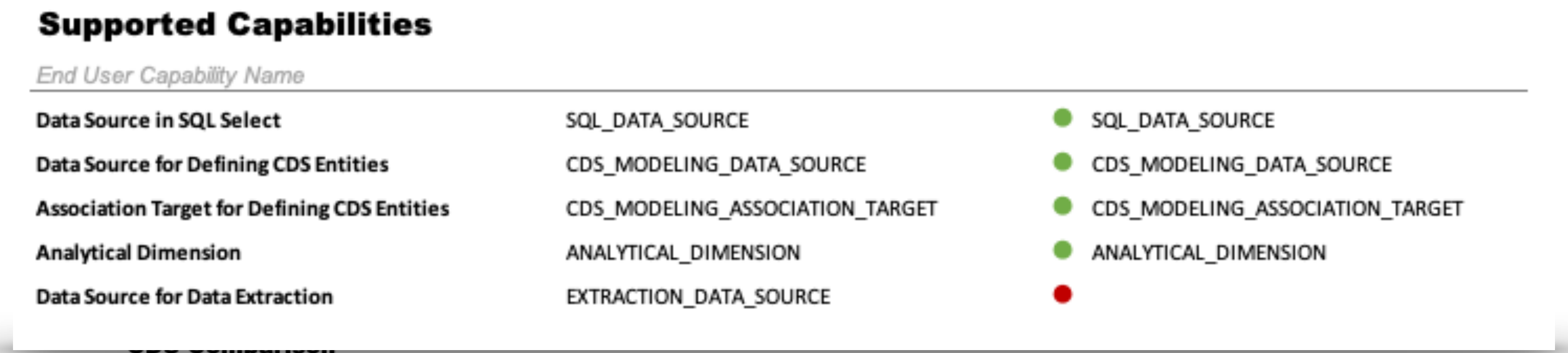
I_CustomerMaterial	I_CustomerMaterial_2
Sales Organization	
Material	
Sold-to Party	
Customer Material	

→ Data Source Joins

🟧 Deprecated Object

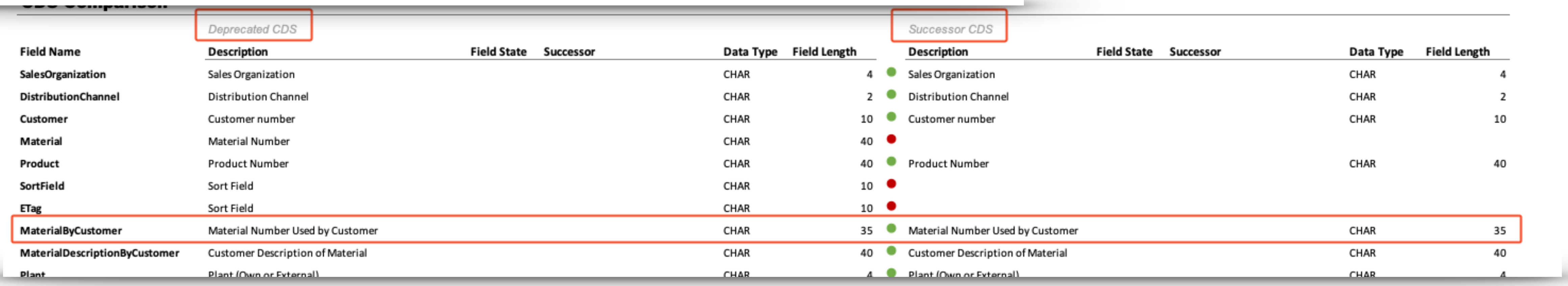
🟩 Successor Object

With respect to the deprecated CDS entity, it could be that the successor CDS entity is different, either in terms of capabilities or in terms of fields (there could be more or less fields and whilst rare the format of fields could have changed), so it is important that you also analyse the differences between these two CDS entities. As we covered earlier, you could do this by checking the View Browser app in your system, or you could check the SAP Business Accelerator Hub, or you could use the Excel tool we have purposefully created for this purpose. You can download it here. We used this tool to compare the (CustomerMaterial) CDS entities. We can see that the successor CDS (on the right) does not support the Data Extraction scenario, but this does not affect us, and we can also see that the field we were using - `MaterialByCustomer` - is still present in the successor CDS.



Supported Capabilities

End User Capability Name			
Data Source in SQL Select	SQL_DATA_SOURCE	🟢	SQL_DATA_SOURCE
Data Source for Defining CDS Entities	CDS_MODELING_DATA_SOURCE	🟢	CDS_MODELING_DATA_SOURCE
Association Target for Defining CDS Entities	CDS_MODELING_ASSOCIATION_TARGET	🟢	CDS_MODELING_ASSOCIATION_TARGET
Analytical Dimension	ANALYTICAL_DIMENSION	🟢	ANALYTICAL_DIMENSION
Data Source for Data Extraction	EXTRACTION_DATA_SOURCE	🔴	

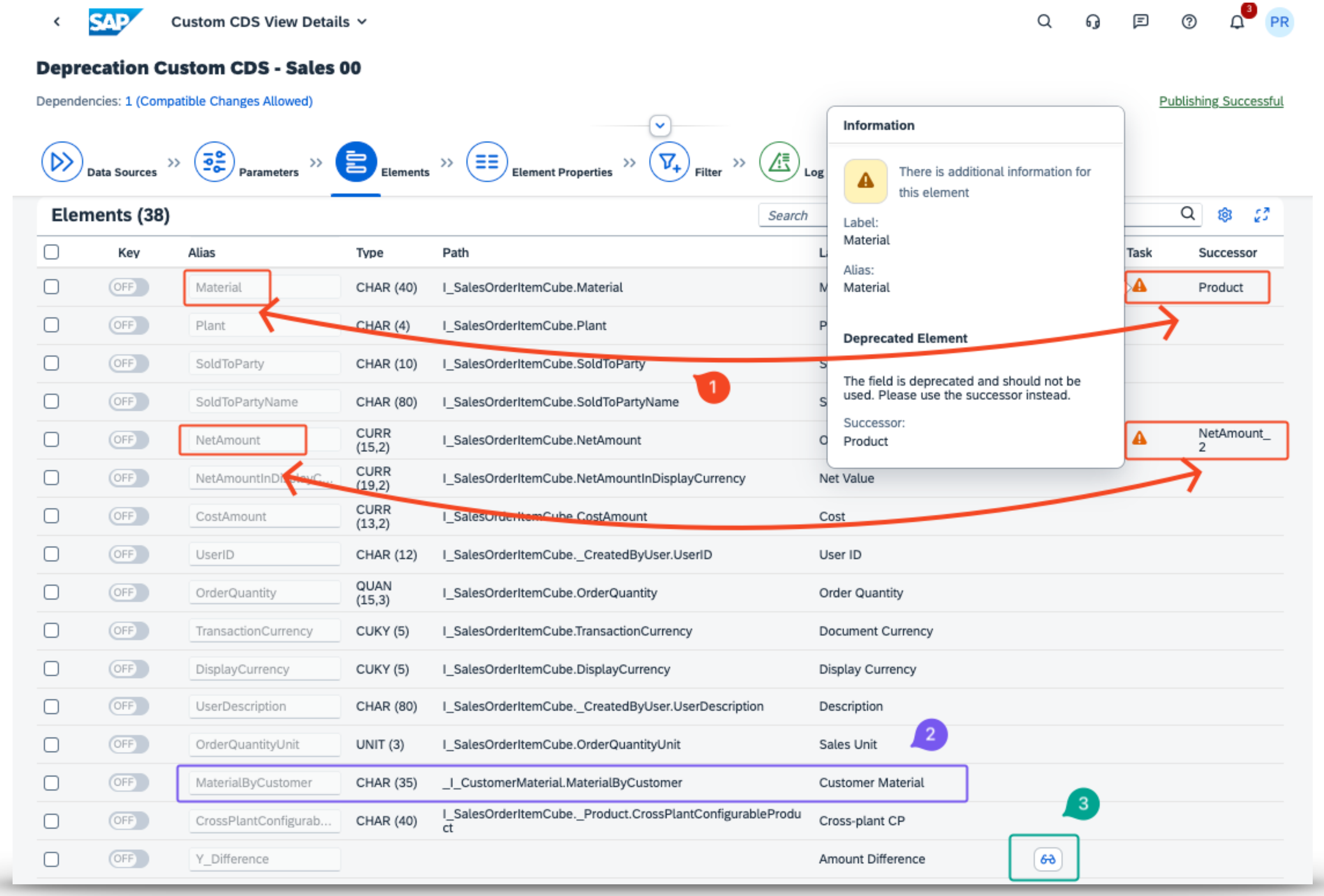


CDS Comparison

	Deprecated CDS						*Successor CDS*				
Field Name	**Description**	**Field State**	**Successor**	**Data Type**	**Field Length**		**Description**	**Field State**	**Successor**	**Data Type**	**Field Length**
SalesOrganization	Sales Organization			CHAR	4	🟢	Sales Organization			CHAR	4
DistributionChannel	Distribution Channel			CHAR	2	🟢	Distribution Channel			CHAR	2
Customer	Customer number			CHAR	10	🟢	Customer number			CHAR	10
Material	Material Number			CHAR	40	🔴					
Product	Product Number			CHAR	40	🟢	Product Number			CHAR	40
SortField	Sort Field			CHAR	10	🔴					
ETag	Sort Field			CHAR	10	🔴					
MaterialByCustomer	Material Number Used by Customer			CHAR	35	🟢	Material Number Used by Customer			CHAR	35
MaterialDescriptionByCustomer	Customer Description of Material			CHAR	40	🟢	Customer Description of Material			CHAR	40
Plant	Plant (Own or External)			CHAR	4	🟢	Plant (Own or External)			CHAR	4

We can also look at the Elements tab, which provides us with further essential information. We can see:

1. A clear indication of those fields that are deprecated, as well as an indication of the successor field that we should be using
2. We also see a field that is part of the deprecated CDS entity, but the field itself is not seemingly deprecated and thus there is no special indication for it here
3. We also see that a calculated field is present (this is a custom data element that we have added), but we see no indication of deprecation against it, even though it uses a deprecated field.



Deprecation Custom CDS - Sales 00

Dependencies: 1 (Compatible Changes Allowed)

Publishing Successful

Elements (38)

☐	Key	Alias	Type	Path	L		Task	Successor
☐	OFF	Material	CHAR (40)	I_SalesOrderItemCube.Material	M		⚠	Product
☐	OFF	Plant	CHAR (4)	I_SalesOrderItemCube.Plant	P			
☐	OFF	SoldToParty	CHAR (10)	I_SalesOrderItemCube.SoldToParty	S			
☐	OFF	SoldToPartyName	CHAR (80)	I_SalesOrderItemCube.SoldToPartyName	S			
☐	OFF	NetAmount	CURR (15,2)	I_SalesOrderItemCube.NetAmount	O		⚠	NetAmount_2
☐	OFF	NetAmountInDisplayC...	CURR (19,2)	I_SalesOrderItemCube.NetAmountInDisplayCurrency	Net Value			
☐	OFF	CostAmount	CURR (13,2)	I_SalesOrderItemCube.CostAmount	Cost			
☐	OFF	UserID	CHAR (12)	I_SalesOrderItemCube._CreatedByUser.UserID	User ID			
☐	OFF	OrderQuantity	QUAN (15,3)	I_SalesOrderItemCube.OrderQuantity	Order Quantity			
☐	OFF	TransactionCurrency	CUKY (5)	I_SalesOrderItemCube.TransactionCurrency	Document Currency			
☐	OFF	DisplayCurrency	CUKY (5)	I_SalesOrderItemCube.DisplayCurrency	Display Currency			
☐	OFF	UserDescription	CHAR (80)	I_SalesOrderItemCube._CreatedByUser.UserDescription	Description			
☐	OFF	OrderQuantityUnit	UNIT (3)	I_SalesOrderItemCube.OrderQuantityUnit	Sales Unit			
☐	OFF	MaterialByCustomer	CHAR (35)	_I_CustomerMaterial.MaterialByCustomer	Customer Material			
☐	OFF	CrossPlantConfigurab...	CHAR (40)	I_SalesOrderItemCube._Product.CrossPlantConfigurableProduct	Cross-plant CP			
☐	OFF	Y_Difference			Amount Difference	👓		

Information

⚠ There is additional information for this element

Label:
Material

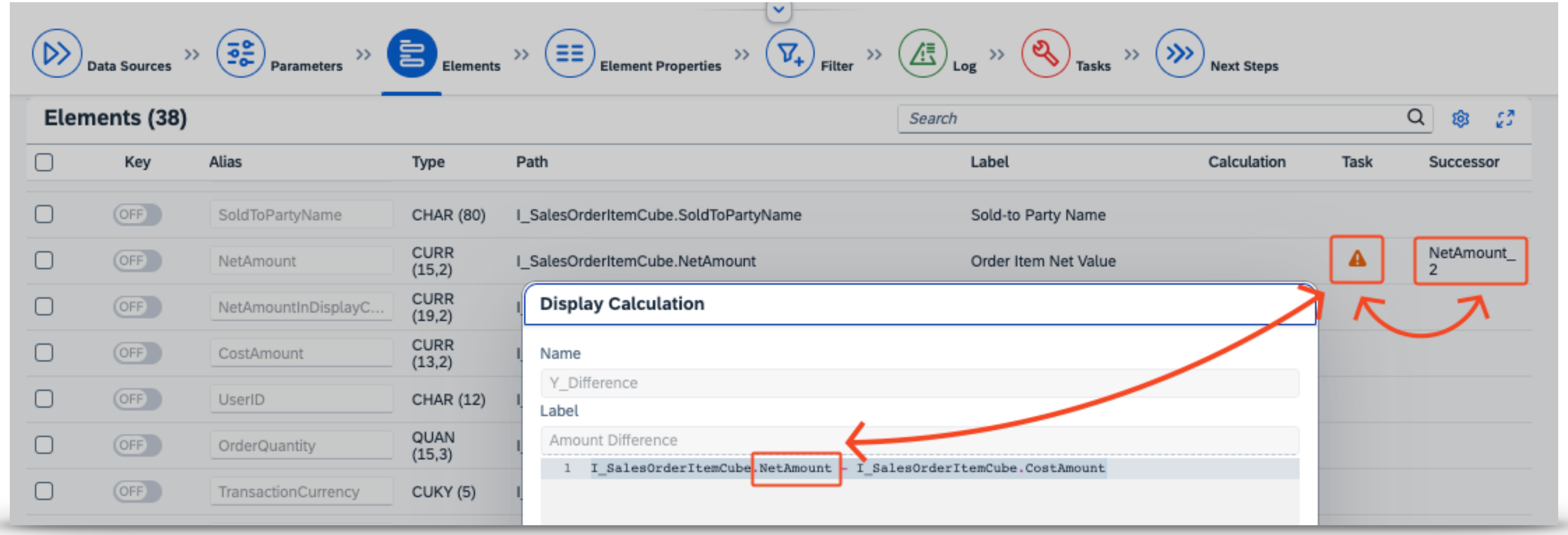
Alias:
Material

Deprecated Element

The field is deprecated and should not be used. Please use the successor instead.

Successor:
Product

This last point is important, because if we click on the Calculated field icon we can reveal the formula used to calculate this field and notice that the formula uses one field (NetAmount), that is deprecated ! This use will not be flagged by any check, so make sure you check. For this field to continue to function correctly, we will need to replace it with the successor also.



Elements (38)

□	Key	Alias	Type	Path	Label	Calculation	Task	Successor
□	OFF	SoldToPartyName	CHAR (80)	I_SalesOrderItemCube.SoldToPartyName	Sold-to Party Name			
□	OFF	NetAmount	CURR (15,2)	I_SalesOrderItemCube.NetAmount	Order Item Net Value		⚠	NetAmount_2
□	OFF	NetAmountInDisplayC...	CURR (19,2)	I				
□	OFF	CostAmount	CURR (13,2)	I				
□	OFF	UserID	CHAR (12)	I				
□	OFF	OrderQuantity	QUAN (15,3)	I				
□	OFF	TransactionCurrency	CUKY (5)	I				

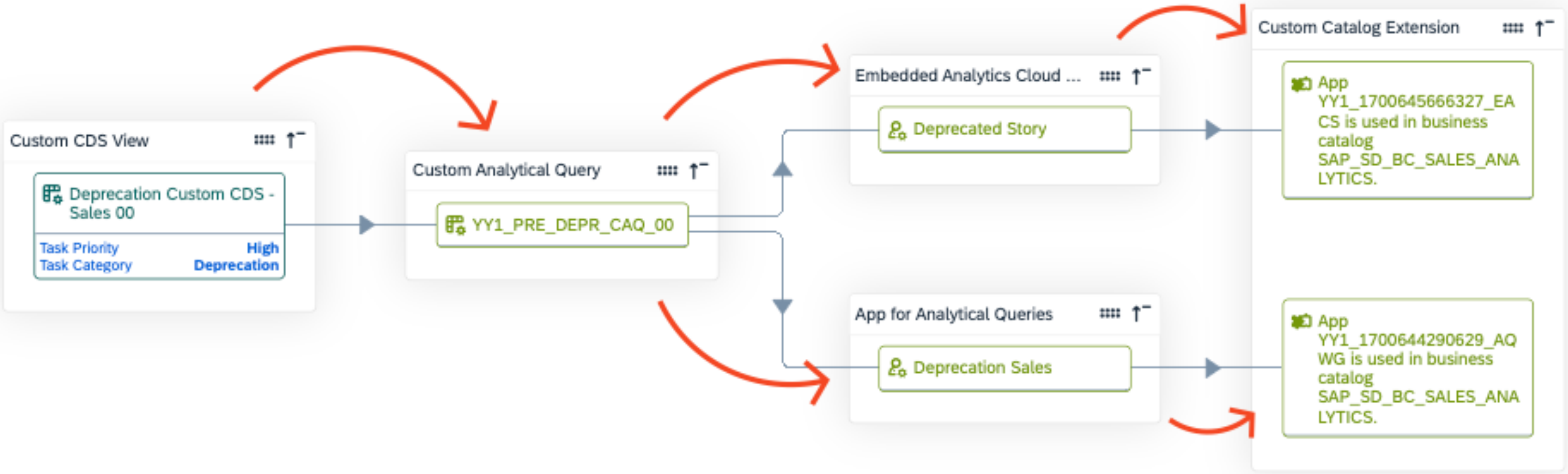
Display Calculation

Name: Y_Difference

Label: Amount Difference

```
I_SalesOrderItemCube.NetAmount - I_SalesOrderItemCube.CostAmount
```

In the bottom right of the Custom CDS detail screen, we also have some buttons that offer navigation options. Let's first look at the one name Inventory. Clicking it, will open a new browser window and open the Extensibility Inventory application, but specifically as it applies to our custom CDS. This will show us a hierarchy, depicting how and where our custom CDS is used. In our case, it shows us a representation such as the one below (your rendition of it may differ depending on the display options you have set for yourself). In our case we have child —> parent representation, showing that our custom CDS is used by a Custom Analytical Query, that is used by a Query report and eSAC story, and each are published to a business catalog (custom catalog extension).



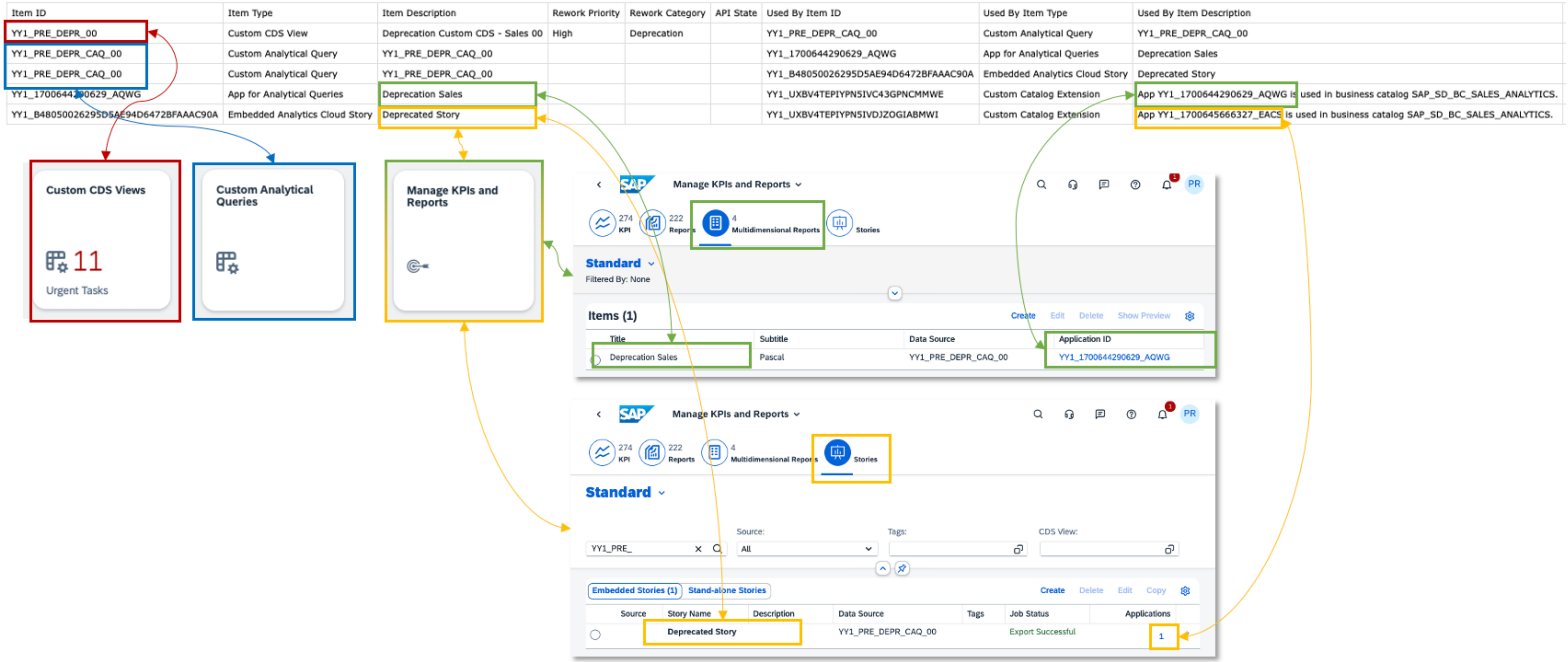
App YY1_1700645666327_EACS is used in business catalog SAP_SD_BC_SALES_ANALYTICS.

App YY1_1700644290629_AQWG is used in business catalog SAP_SD_BC_SALES_ANALYTICS.

We also have in the top right a button named Download Item Dependencies that allows us to download these dependencies in tabular format.

Download Item Dependencies

Once your download is completed, you will have a zip archive containing two files. One starting with the word ‘depending’ and one starting with the words ‘used_by’. If we look at the latter file that pertains to our scenario we have, the below information, which really provides us with a roadmap of where we need to make changes.



Item ID	Item Type	Item Description	Rework Priority	Rework Category	API State	Used By Item ID	Used By Item Type	Used By Item Description
YY1_PRE_DEPR_00	Custom CDS View	Deprecation Custom CDS - Sales 00	High	Deprecation		YY1_PRE_DEPR_CAQ_00	Custom Analytical Query	YY1_PRE_DEPR_CAQ_00
YY1_PRE_DEPR_CAQ_00	Custom Analytical Query	YY1_PRE_DEPR_CAQ_00				YY1_1700644290629_AQWG	App for Analytical Queries	Deprecation Sales
YY1_PRE_DEPR_CAQ_00	Custom Analytical Query	YY1_PRE_DEPR_CAQ_00				YY1_B48050026295D5AE94D6472BFAAAC90A	Embedded Analytics Cloud Story	Deprecated Story
YY1_1700644290629_AQWG	App for Analytical Queries	Deprecation Sales				YY1_UXBV4TEPIYPN5IVC43GPNCMMWE	Custom Catalog Extension	App YY1_1700644290629_AQWG is used in business catalog SAP_SD_BC_SALES_ANALYTICS.
YY1_B48050026295D5AE94D6472BFAAAC90A	Embedded Analytics Cloud Story	Deprecated Story				YY1_UXBV4TEPIYPN5IVDJZOGIABMWI	Custom Catalog Extension	App YY1_1700645666327_EACS is used in business catalog SAP_SD_BC_SALES_ANALYTICS.

Title	Subtitle	Data Source	Application ID
Deprecation Sales	Pascal	YY1_PRE_DEPR_CAQ_00	YY1_1700644290629_AQWG

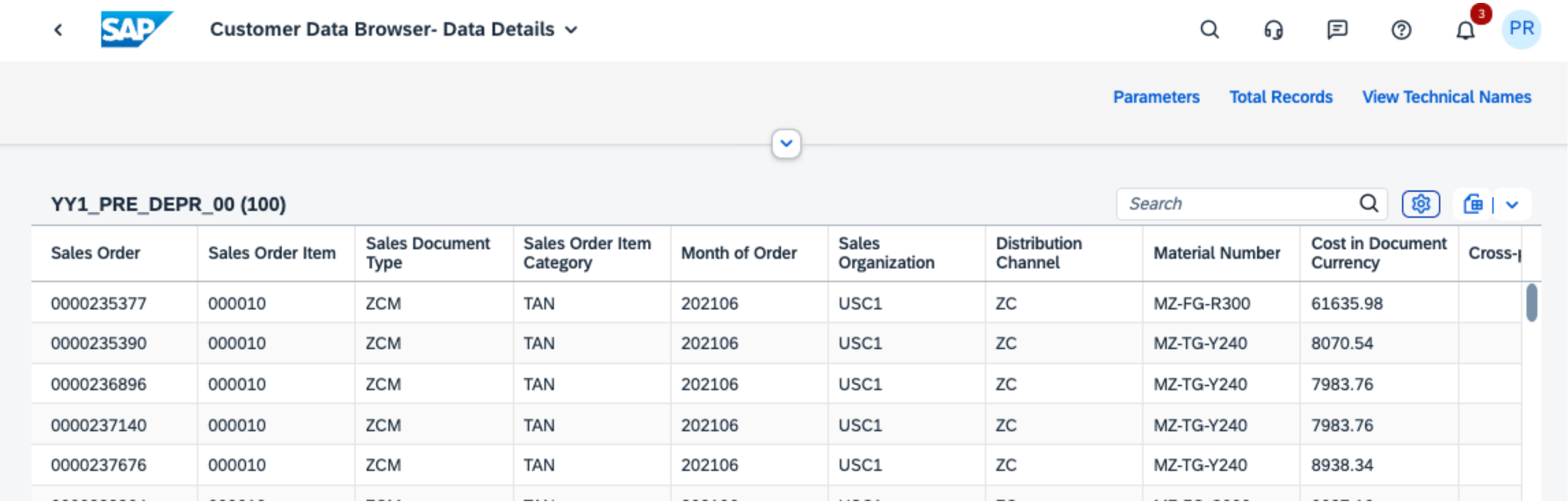
YY1_PRE_

Source: All

Source	Story Name	Description	Data Source	Tags	Job Status	Applications
	Deprecated Story		YY1_PRE_DEPR_CAQ_00		Export Successful	1

If we now go back to the custom CDS detail screen, we can try the former button named Data Browser. Clicking this button will also open a new browser window, in which the app Customer Data Browser will be launched. This app will show in an tabular like presentation layer the data content of our custom CDS, in tabular format.

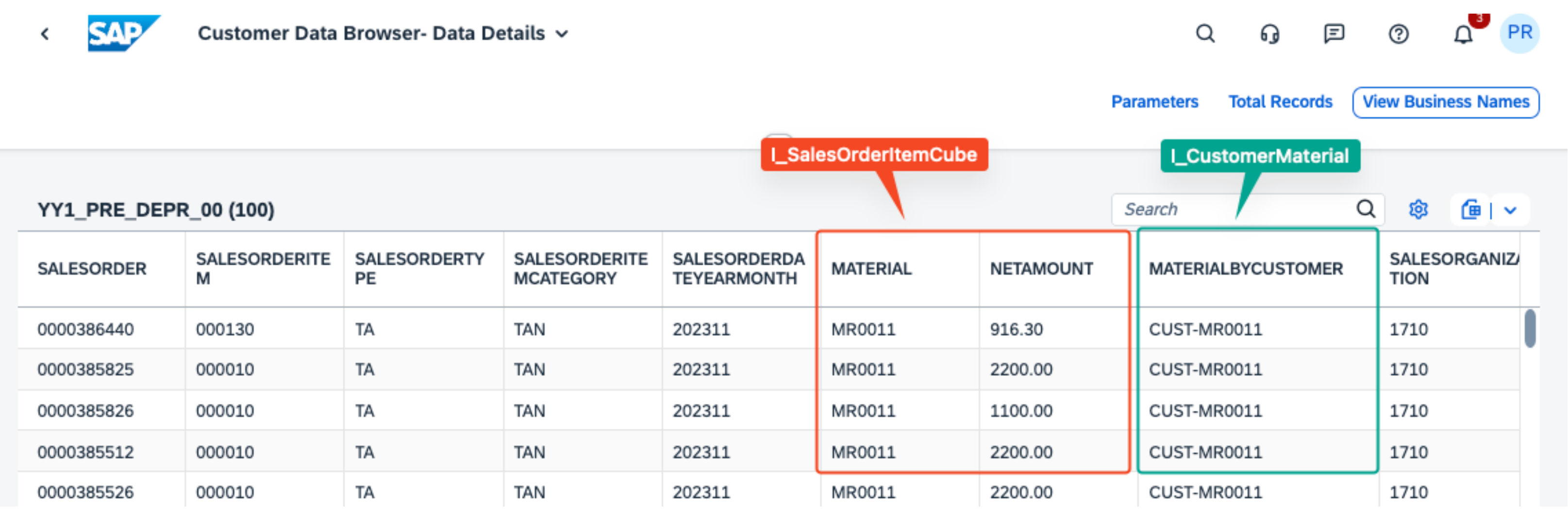
If you are like us in this scenario making changes to the existing objects and depending on the amount of data provided by your custom CDS, I would recommend that before you start making changes, you make a complete download of this data (elements and content), or at least download a good sample of data that is later going to allow you to verify that you have processed the deprecation correctly.



YY1_PRE_DEPR_00 (100)

Sales Order	Sales Order Item	Sales Document Type	Sales Order Item Category	Month of Order	Sales Organization	Distribution Channel	Material Number	Cost in Document Currency	Cross-|
0000235377	000010	ZCM	TAN	202106	USC1	ZC	MZ-FG-R300	61635.98	
0000235390	000010	ZCM	TAN	202106	USC1	ZC	MZ-TG-Y240	8070.54	
0000236896	000010	ZCM	TAN	202106	USC1	ZC	MZ-TG-Y240	7983.76	
0000237140	000010	ZCM	TAN	202106	USC1	ZC	MZ-TG-Y240	7983.76	
0000237676	000010	ZCM	TAN	202106	USC1	ZC	MZ-TG-Y240	8938.34	

Your download should at the very least include ALL the deprecated fields and any other field(s) that makes use of the deprecated fields (for example a calculated element). You will need this because once you have removed the deprecated fields (remember that is why we are doing all this!) You will need to be able to verify that your custom CDS is still providing all the data that it, as a data source needs to provide to the rest of the reporting objects (query report, eSAC, etc…). In our case, we have on the right highlighted the fields that are deprecated and that we will ultimately remove from our custom CDS. So once the deprecation is processed, we need to be able to verify that the successor objects, and the use we make of them do not present a regression.



I_SalesOrderItemCube

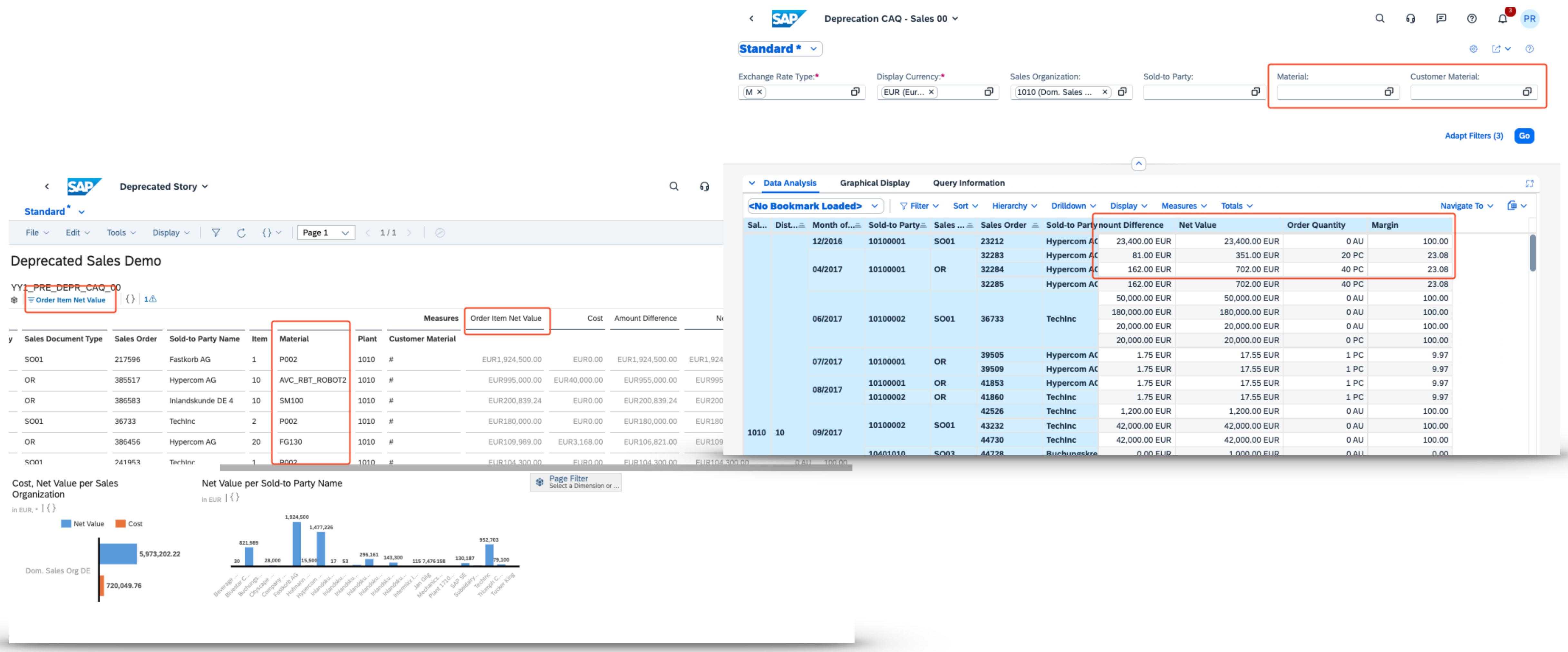
I_CustomerMaterial

YY1_PRE_DEPR_00 (100)

SALESORDER	SALESORDERITEM	SALESORDERTYPE	SALESORDERITEMCATEGORY	SALESORDERDATEYEARMONTH	MATERIAL	NETAMOUNT	MATERIALBYCUSTOMER	SALESORGANIZATION
0000386440	000130	TA	TAN	202311	MR0011	916.30	CUST-MR0011	1710
0000385825	000010	TA	TAN	202311	MR0011	2200.00	CUST-MR0011	1710
0000385826	000010	TA	TAN	202311	MR0011	1100.00	CUST-MR0011	1710
0000385512	000010	TA	TAN	202311	MR0011	2200.00	CUST-MR0011	1710
0000385526	000010	TA	TAN	202311	MR0011	2200.00	CUST-MR0011	1710

In a similar vain, we would recommend that you also make downloads and/or take screenshots of the query report, eSAC story and any other ways you are making use of the custom CDS to make sure that any filters, columns, calculations you are doing still function correctly after the changes are made. In the event where your objects have already been transported to the Test and/or Production system, you will be able to have a reference with respect to filters and layouts, but the data will be specific to each system, and you do not want to be in a position where your business users, in production let you know that something does not look right !

As an example, we have below added screenshots of both the query report, as well as the eSAC story and highlighted where use of the deprecated elements is made. We will skip showing this step, but we have made copies of the data served and layout where applicable, from the customer data browser, the query report and the eSAC story.



Exchange Rate Type:* M
Display Currency:* EUR (Eur...
Sales Organization: 1010 (Dom. Sales ...
Sold-to Party:
Material:
Customer Material:

Sal...	Dist...	Month of...	Sold-to Party	Sales ...	Sales Order	Sold-to Party	nount Difference	Net Value	Order Quantity	Margin
1010	10	12/2016	10100001	SO01	23212	Hypercom AG	23,400.00 EUR	23,400.00 EUR	0 AU	100.00
		04/2017	10100001	OR	32283	Hypercom AG	81.00 EUR	351.00 EUR	20 PC	23.08
					32284	Hypercom AG	162.00 EUR	702.00 EUR	40 PC	23.08
					32285	Hypercom AG	162.00 EUR	702.00 EUR	40 PC	23.08
		06/2017	10100002	SO01	36733	TechInc	50,000.00 EUR	50,000.00 EUR	0 AU	100.00
							180,000.00 EUR	180,000.00 EUR	0 AU	100.00
							20,000.00 EUR	20,000.00 EUR	0 AU	100.00
							20,000.00 EUR	20,000.00 EUR	0 PC	100.00
		07/2017	10100001	OR	39505	Hypercom AG	1.75 EUR	17.55 EUR	1 PC	9.97
					39509	Hypercom AG	1.75 EUR	17.55 EUR	1 PC	9.97
		08/2017	10100001	OR	41853	Hypercom AG	1.75 EUR	17.55 EUR	1 PC	9.97
			10100002	OR	41860	TechInc	1.75 EUR	17.55 EUR	1 PC	9.97
		09/2017	10100002	SO01	42526	TechInc	1,200.00 EUR	1,200.00 EUR	0 AU	100.00
					43232	TechInc	42,000.00 EUR	42,000.00 EUR	0 AU	100.00
					44730	TechInc	42,000.00 EUR	42,000.00 EUR	0 AU	100.00
			10401010	SO03	44728	Buchungskre	0.00 EUR	1,000.00 EUR	0 AU	0.00

Deprecated Sales Demo

YY1_PRE_DEPR_CAQ_00
Order Item Net Value

y	Sales Document Type	Sales Order	Sold-to Party Name	Item	Material	Plant	Customer Material	Order Item Net Value	Cost	Amount Difference	Ne
							Measures				
	SO01	217596	Fastkorb AG	1	P002	1010	#	EUR1,924,500.00	EUR0.00	EUR1,924,500.00	EUR1,924
	OR	385517	Hypercom AG	10	AVC_RBT_ROBOT2	1010	#	EUR995,000.00	EUR40,000.00	EUR955,000.00	EUR995
	OR	386583	Inlandskunde DE 4	10	SM100	1010	#	EUR200,839.24	EUR0.00	EUR200,839.24	EUR200
	SO01	36733	TechInc	2	P002	1010	#	EUR180,000.00	EUR0.00	EUR180,000.00	EUR180
	OR	386456	Hypercom AG	20	FG130	1010	#	EUR109,989.00	EUR3,168.00	EUR106,821.00	EUR109
	SO01	241953	TechInc	1	P002	1010	#	EUR104,300.00	EUR0.00	EUR104,300.00	EUR104,300.00

Cost, Net Value per Sales Organization
in EUR, *

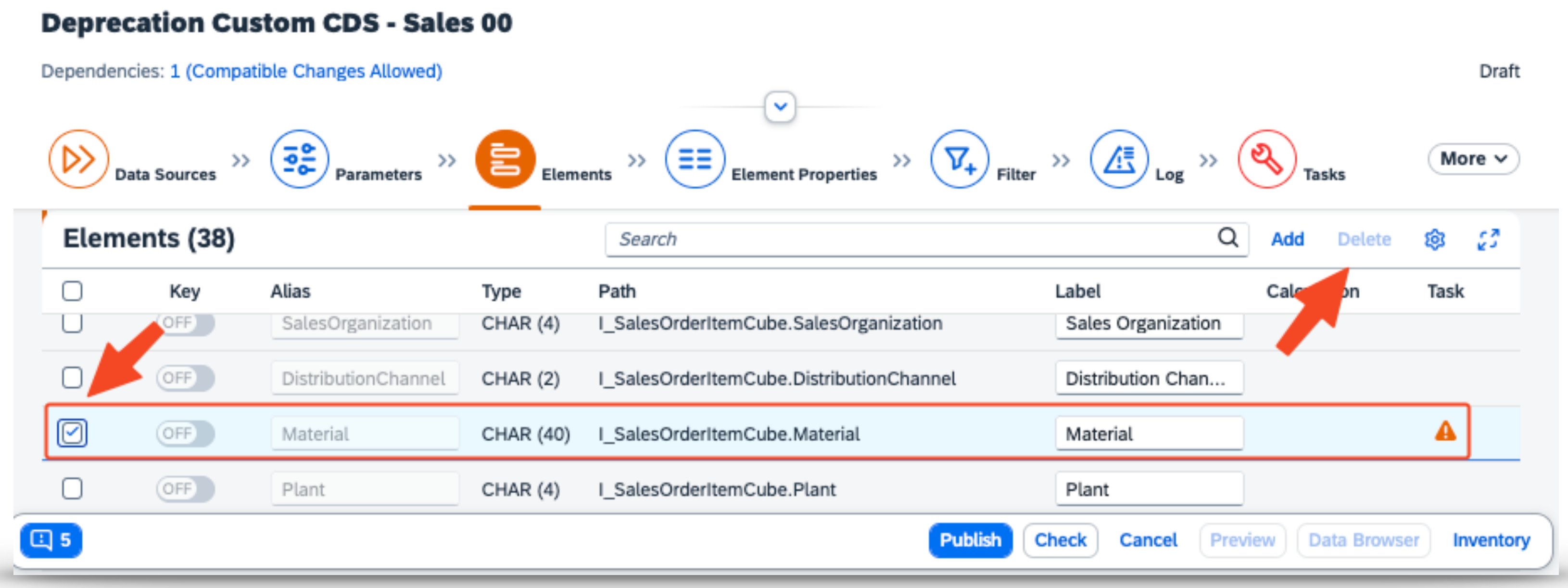
Net Value per Sold-to Party Name
in EUR

The Process

Now that we have done our analysis, we know what we need to change and where we need to change things, and we have also made backups of our data so we can make before change and after change comparisons at every step of the way.

Logically, one might think that we will start at the bottom and make our way up the stack. By that I mean that, one might think that it would be easy enough to remove the deprecated fields from the custom CDS, add the successor fields in the custom CDS, save and publish, then move on to the Custom Analytical Query, redo the wiring there , then move on to the eSAC story and so on. Unfortunately, in practice it does not work quite like this. I would also stress that some objects are hard coupled and some are loosely coupled. By that I mean that some CDS changes are checked/validated against the custom analytical query (hard coupled), but on the other hand you can remove a field in the custom analytical query irrespective of whether it is used in the eSAC story or not, without any error or validation message (hence also why we suggested making those data downloads for before/after comparisons!).

To illustrate this, let's for example go to our custom CDS into edit mode and try to remove one of the deprecated fields —> `Material`. As you can see, the Delete button remains invariably unaccessible - because deleting this field would be an incompatible change (as the field is used in the Custom Analytical Query). However, we can see that the Add option is available, so we can add - successor fields.



Deprecation Custom CDS - Sales 00

Dependencies: 1 (Compatible Changes Allowed)

Draft

Elements (38)

☐	Key	Alias	Type	Path	Label	Cal on	Task
☐	OFF	SalesOrganization	CHAR (4)	I_SalesOrderItemCube.SalesOrganization	Sales Organization		
☐	OFF	DistributionChannel	CHAR (2)	I_SalesOrderItemCube.DistributionChannel	Distribution Chan...		
☑	OFF	Material	CHAR (40)	I_SalesOrderItemCube.Material	Material		⚠
☐	OFF	Plant	CHAR (4)	I_SalesOrderItemCube.Plant	Plant		

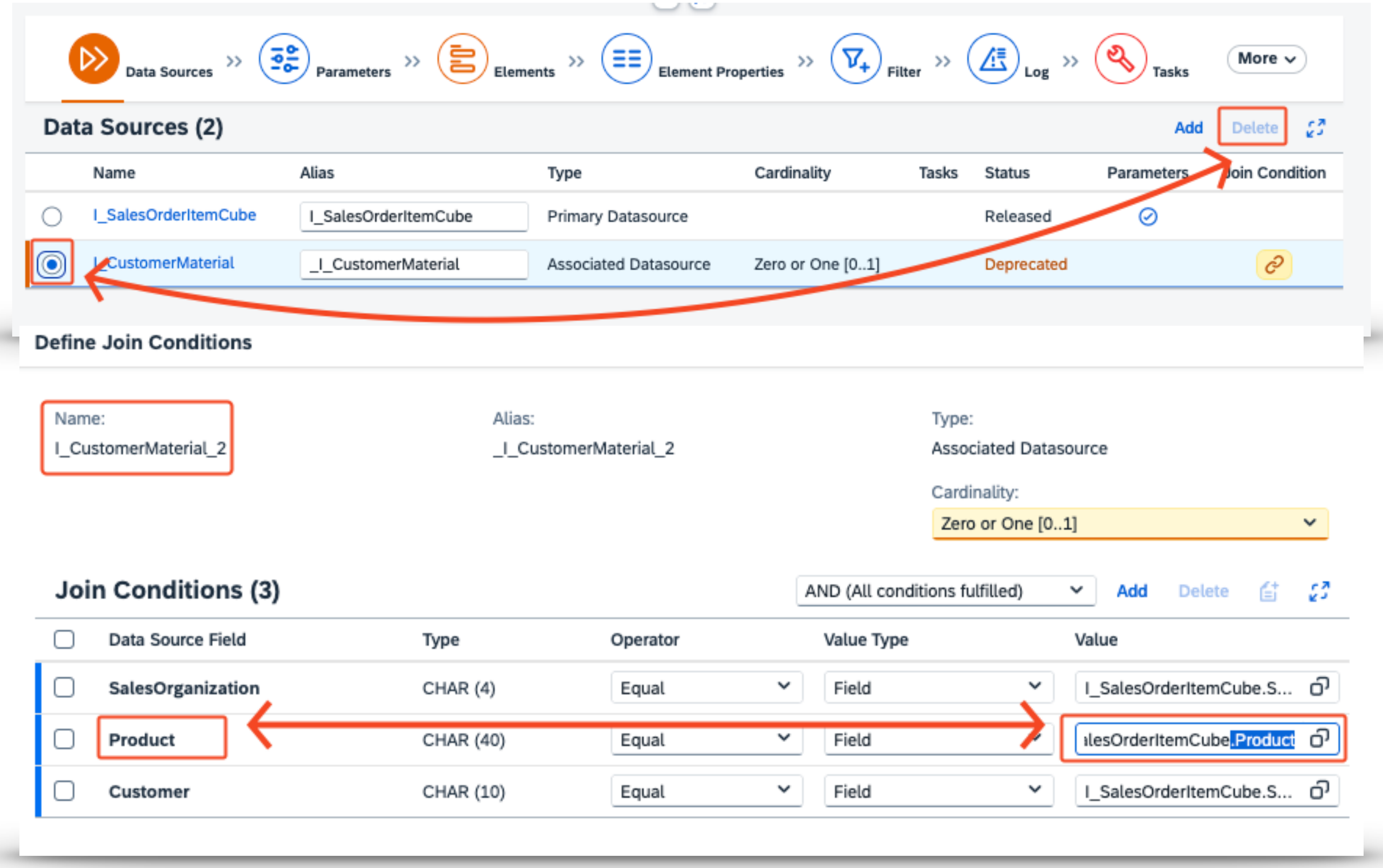
So at this point you might think that it feels a little like the dog chasing his own tail scenario, and it is. This means that however we look at this, we will need to do something in the Custom CDS app, then process changes in the custom Analytical query app and there do all the changes that prevent us from deleting the deprecated fields from the custom CDS app, then go back to the custom CDS app to finally remove the deprecated fields. Truth be told, whilst we will not present it here, we could also have started the changes from the Custom Analytical Query app (by removing the deprecated fields from display), but this would not have spared us the same round trip of having to come back to the custom analytical query (to add the successor fields). We prefer to use the workflow we will go through in this document as it allows for us to better check incrementally that our changes will not present any regression.

Step 1 - Amending the Custom CDS and adding the successor elements

We start by going to the Custom CDS app and switch to edit mode in our custom CDS. Here we will add all the Successor objects, that is the customer CDS entity `I_CustomerMaterial_2` and the successor fields `Product` and `NetAmount_2` from the CDS `I_SalesOrderItemCube`.

We cannot delete or simply amend the name of the deprecated CDS entity at this moment as it is used.

We will add the successor CDS entity, taking care of not using the field `Material` in the join, as we earlier noted that it was used, and instead use the successor field which is `Product`.



Data Sources (2)

	Name	Alias	Type	Cardinality	Tasks	Status	Parameters	Join Condition
○	I_SalesOrderItemCube	I_SalesOrderItemCube	Primary Datasource			Released	✓	
●	I_CustomerMaterial	_I_CustomerMaterial	Associated Datasource	Zero or One [0..1]		Deprecated		🔗

Define Join Conditions

Name: I_CustomerMaterial_2

Alias: _I_CustomerMaterial_2

Type: Associated Datasource

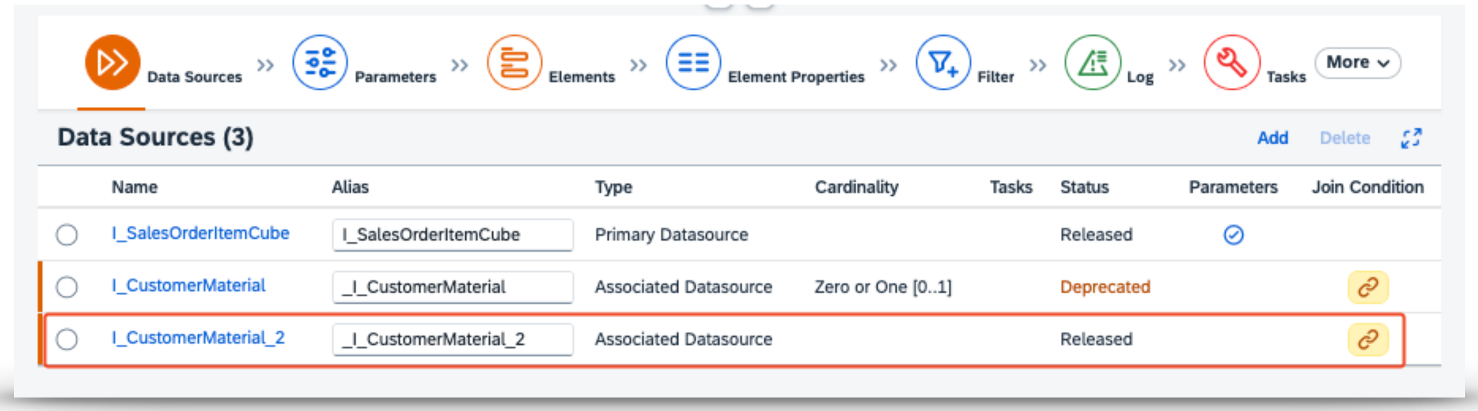
Cardinality: Zero or One [0..1]

Join Conditions (3)

AND (All conditions fulfilled)

□	Data Source Field	Type	Operator	Value Type	Value
□	SalesOrganization	CHAR (4)	Equal	Field	I_SalesOrderItemCube.S...
□	Product	CHAR (40)	Equal	Field	ılesOrderItemCube.Product
□	Customer	CHAR (10)	Equal	Field	I_SalesOrderItemCube.S...

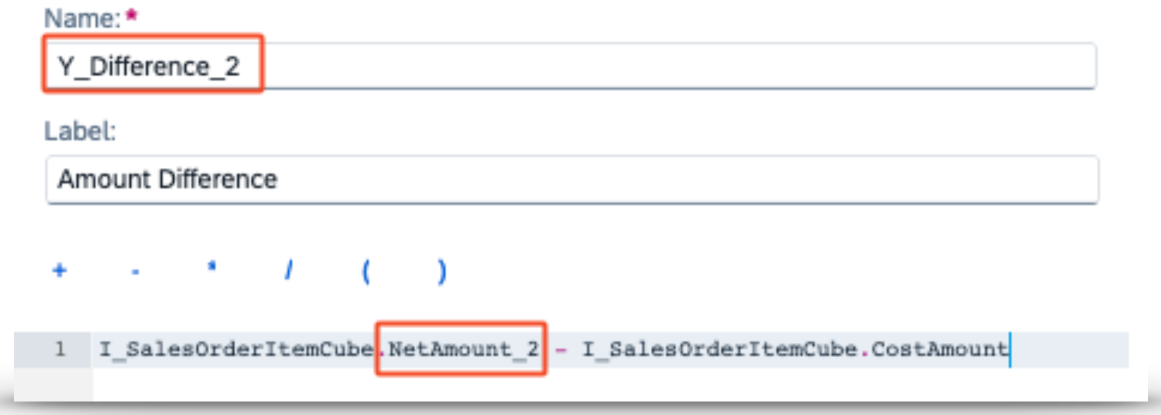
At this point we will have two associations to the primary data source (one association with the deprecated CDS, and one association to the successor CDS). We will revisit this later, when we are able to delete the join to the deprecated CDS entity.



Data Sources (3)

	Name	Alias	Type	Cardinality	Tasks	Status	Parameters	Join Condition
○	I_SalesOrderItemCube	I_SalesOrderItemCube	Primary Datasource			Released	✓	
○	I_CustomerMaterial	_I_CustomerMaterial	Associated Datasource	Zero or One [0..1]		Deprecated		🔗
○	I_CustomerMaterial_2	_I_CustomerMaterial_2	Associated Datasource			Released		🔗

We then go to the Elements tab, and here we will add all the new successor fields (as previously noted we cannot yet delete the deprecated fields, as they are still used in the custom Analytical Query). Similarly, we cannot simply amend the formula of our calculation field which uses the deprecated field `NetAmount` as it is also used in the custom analytical query, so we will also need to add a new calculation field, making sure to use the successor field.



Name:*

Y_Difference_2

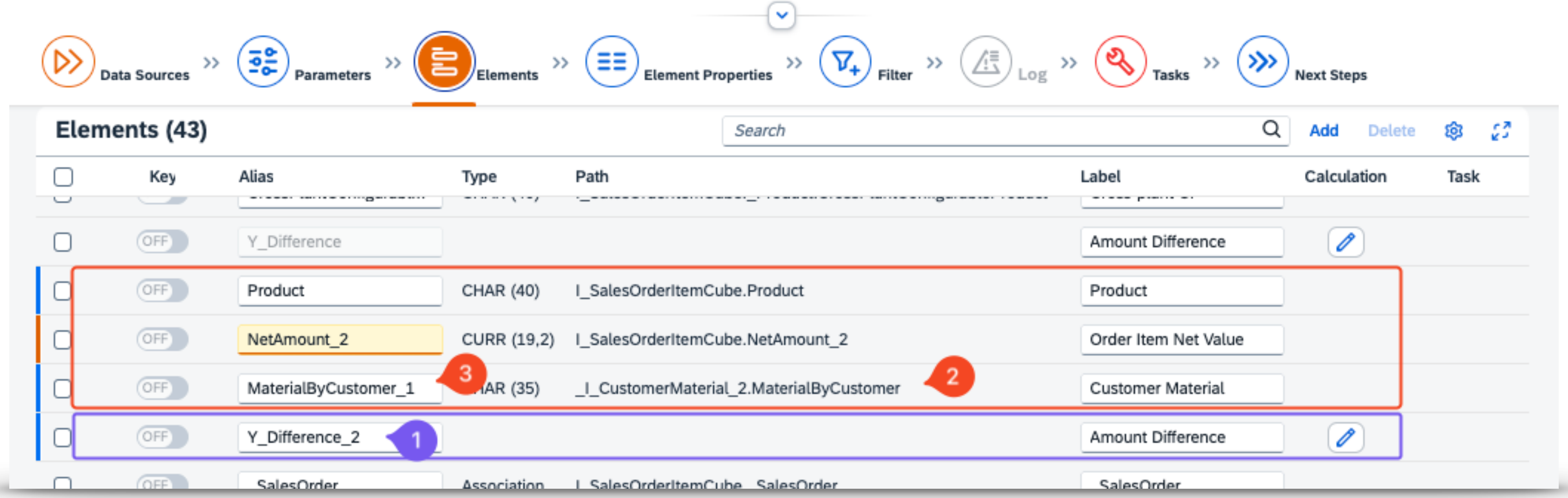
Label:

Amount Difference

```
I_SalesOrderItemCube.NetAmount_2 - I_SalesOrderItemCube.CostAmount
```

If we look at the list of Elements, we see all the new - successor - fields we have just added. Interesting things to point out are:

1. For the calculation field we added, we suffixed the alias with _2 (we could have named the alias anything we wanted except `Y_Difference`, since that is the name of the original calculation field and it is still present in the CDS - and you cannot have more than one alias with the same name!)
2. We see that we have added the field `MaterialByCustomer` from the successor CDS entity `I_CustomerMaterial_2` but we also see
3. That the alias of this field has been suffixed with _1 automatically, because we still have the same field (provided by the deprecated CDS entity with the same name) in our custom CDS. The same reason applies here, we cannot have two aliases with the same name.



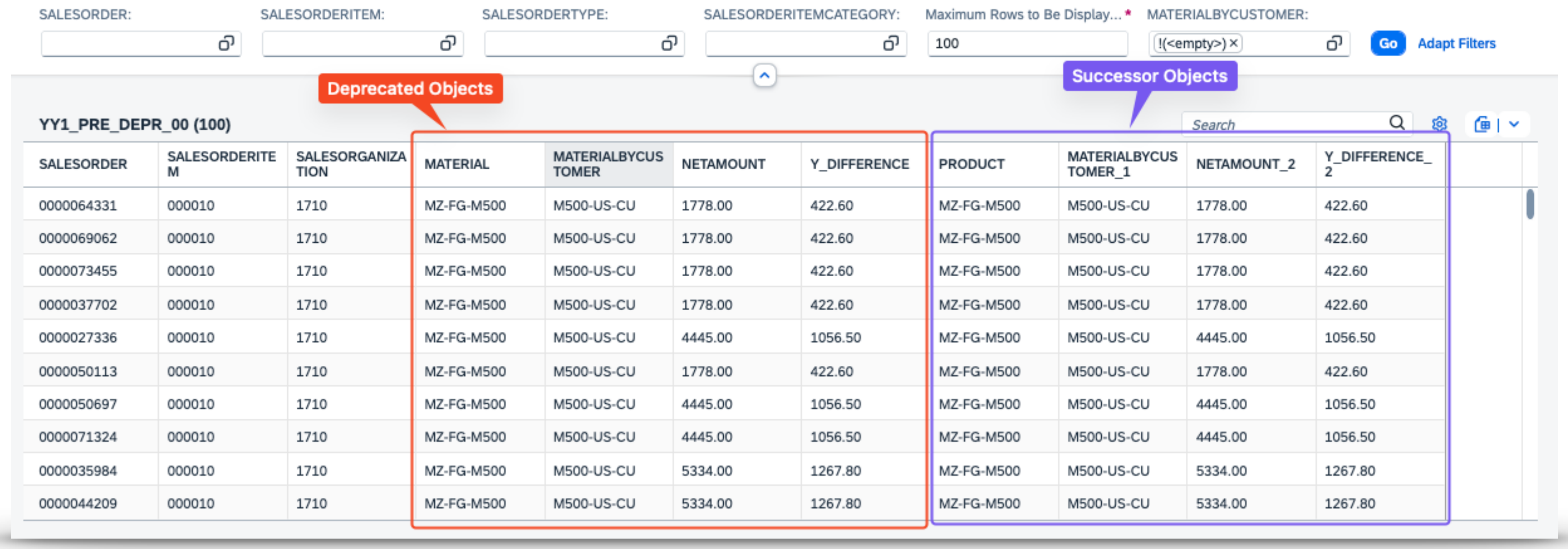
Elements (43)

□	Key	Alias	Type	Path	Label	Calculation	Task
□	OFF	Y_Difference			Amount Difference	✎	
□	OFF	Product	CHAR (40)	I_SalesOrderItemCube.Product	Product		
□	OFF	NetAmount_2	CURR (19,2)	I_SalesOrderItemCube.NetAmount_2	Order Item Net Value		
□	OFF	MaterialByCustomer_1	AR (35)	_I_CustomerMaterial_2.MaterialByCustomer	Customer Material		
□	OFF	Y_Difference_2			Amount Difference	✎	
□	OFF	SalesOrder	Association	I_SalesOrderItemCube._SalesOrder	SalesOrder		

You may also need to adjust the element properties, but at this point we will perform a check to make sure there are no errors, and if not publish the changes.

Step 2 - Check the non regression of your changes in the Custom CDS

Before we move on to the next step, we want to check that the field changes we made to the Custom CDS still deliver the information we will subsequently need. For this we call the Data Browser, right from the Custom CDS. We then adjust the fields and output and check that the successor fields deliver information, and that it is identical to the deprecated fields, which in this case it is!



SALESORDER:

SALESORDERITEM:

SALESORDERTYPE:

SALESORDERITEMCATEGORY:

Maximum Rows to Be Display...* 100

MATERIALBYCUSTOMER: !(<empty>) ×

Deprecated Objects

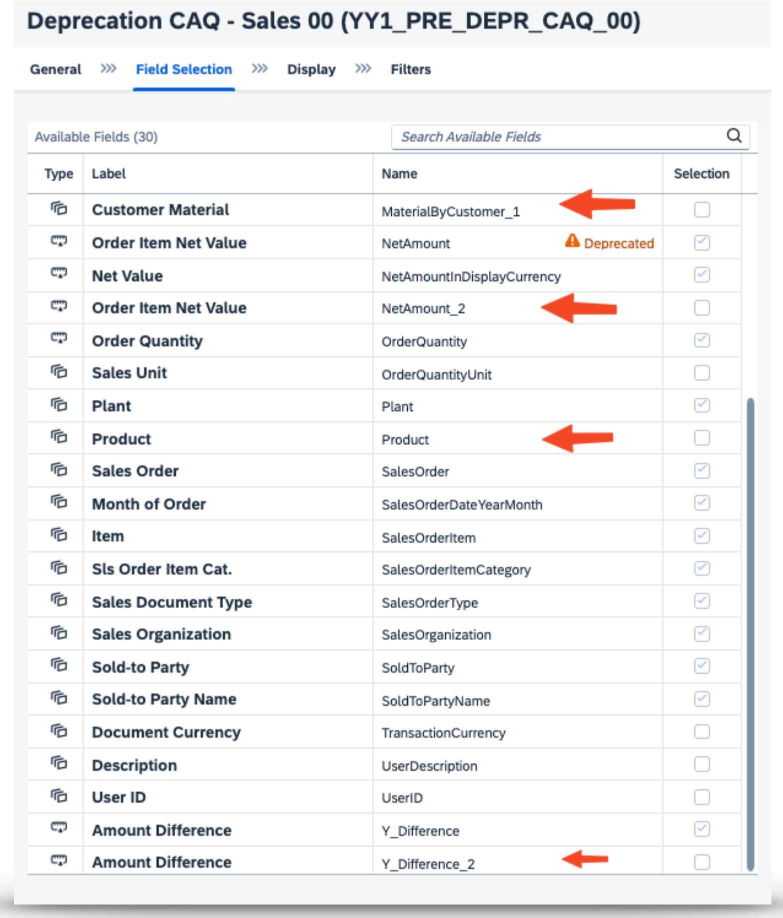
Successor Objects

YY1_PRE_DEPR_00 (100)

SALESORDER	SALESORDERITEM	SALESORGANIZATION	MATERIAL	MATERIALBYCUSTOMER	NETAMOUNT	Y_DIFFERENCE	PRODUCT	MATERIALBYCUSTOMER_1	NETAMOUNT_2	Y_DIFFERENCE_2
0000064331	000010	1710	MZ-FG-M500	M500-US-CU	1778.00	422.60	MZ-FG-M500	M500-US-CU	1778.00	422.60
0000069062	000010	1710	MZ-FG-M500	M500-US-CU	1778.00	422.60	MZ-FG-M500	M500-US-CU	1778.00	422.60
0000073455	000010	1710	MZ-FG-M500	M500-US-CU	1778.00	422.60	MZ-FG-M500	M500-US-CU	1778.00	422.60
0000037702	000010	1710	MZ-FG-M500	M500-US-CU	1778.00	422.60	MZ-FG-M500	M500-US-CU	1778.00	422.60
0000027336	000010	1710	MZ-FG-M500	M500-US-CU	4445.00	1056.50	MZ-FG-M500	M500-US-CU	4445.00	1056.50
0000050113	000010	1710	MZ-FG-M500	M500-US-CU	1778.00	422.60	MZ-FG-M500	M500-US-CU	1778.00	422.60
0000050697	000010	1710	MZ-FG-M500	M500-US-CU	4445.00	1056.50	MZ-FG-M500	M500-US-CU	4445.00	1056.50
0000071324	000010	1710	MZ-FG-M500	M500-US-CU	4445.00	1056.50	MZ-FG-M500	M500-US-CU	4445.00	1056.50
0000035984	000010	1710	MZ-FG-M500	M500-US-CU	5334.00	1267.80	MZ-FG-M500	M500-US-CU	5334.00	1267.80
0000044209	000010	1710	MZ-FG-M500	M500-US-CU	5334.00	1267.80	MZ-FG-M500	M500-US-CU	5334.00	1267.80

Step 3 - Amending the Custom Analytical Query

We now move on to the Custom Analytical Queries app, to amend our query. Even without going into edit mode, we can already in the Field Selection tab see the fields we just added to the Custom CDS. So let's go into edit mode and add the successor fields to our query, but do not uncheck the deprecated fields just yet.

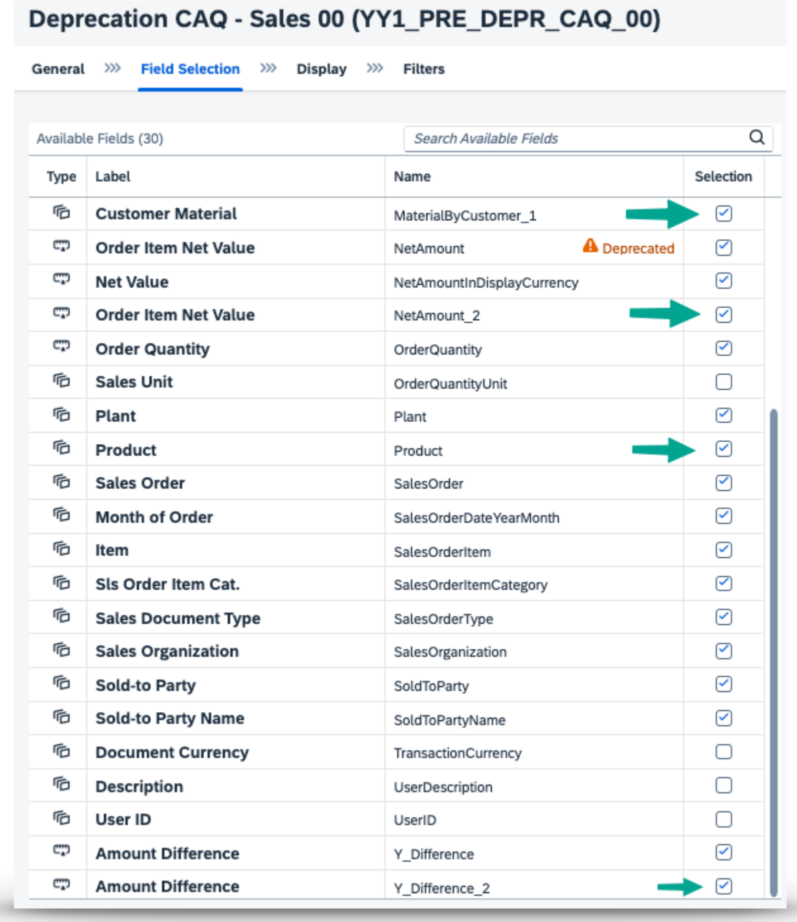


Deprecation CAQ - Sales 00 (YY1_PRE_DEPR_CAQ_00)

Available Fields (30)

Type	Label	Name	Selection
	Customer Material	MaterialByCustomer_1	□
	Order Item Net Value	NetAmount ⚠ Deprecated	☑
	Net Value	NetAmountInDisplayCurrency	☑
	Order Item Net Value	NetAmount_2	□
	Order Quantity	OrderQuantity	☑
	Sales Unit	OrderQuantityUnit	□
	Plant	Plant	☑
	Product	Product	□
	Sales Order	SalesOrder	☑
	Month of Order	SalesOrderDateYearMonth	☑
	Item	SalesOrderItem	☑
	Sls Order Item Cat.	SalesOrderItemCategory	☑
	Sales Document Type	SalesOrderType	☑
	Sales Organization	SalesOrganization	☑
	Sold-to Party	SoldToParty	☑
	Sold-to Party Name	SoldToPartyName	☑
	Document Currency	TransactionCurrency	□
	Description	UserDescription	□
	User ID	UserID	□
	Amount Difference	Y_Difference	☑
	Amount Difference	Y_Difference_2	□

After going into edit mode, we check the successor fields (right), but we also do not uncheck the deprecated ones just yet (left).

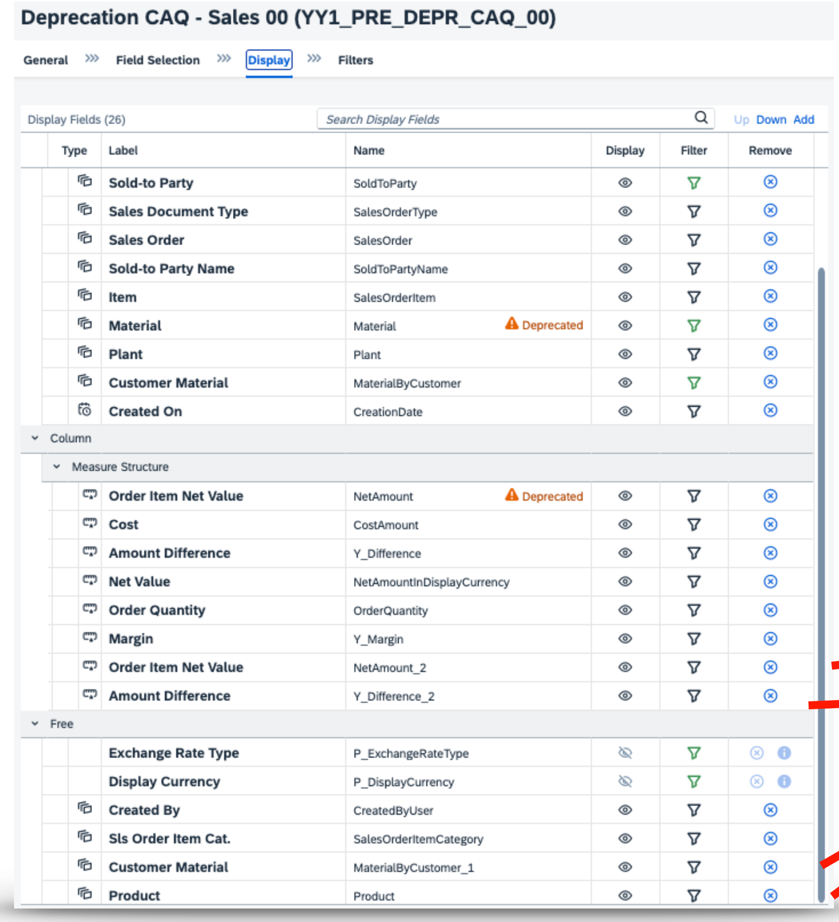


Deprecation CAQ - Sales 00 (YY1_PRE_DEPR_CAQ_00)

Available Fields (30)

Type	Label	Name	Selection
	Customer Material	MaterialByCustomer_1	☑
	Order Item Net Value	NetAmount ⚠ Deprecated	☑
	Net Value	NetAmountInDisplayCurrency	☑
	Order Item Net Value	NetAmount_2	☑
	Order Quantity	OrderQuantity	☑
	Sales Unit	OrderQuantityUnit	□
	Plant	Plant	☑
	Product	Product	☑
	Sales Order	SalesOrder	☑
	Month of Order	SalesOrderDateYearMonth	☑
	Item	SalesOrderItem	☑
	Sls Order Item Cat.	SalesOrderItemCategory	☑
	Sales Document Type	SalesOrderType	☑
	Sales Organization	SalesOrganization	☑
	Sold-to Party	SoldToParty	☑
	Sold-to Party Name	SoldToPartyName	☑
	Document Currency	TransactionCurrency	□
	Description	UserDescription	□
	User ID	UserID	□
	Amount Difference	Y_Difference	☑
	Amount Difference	Y_Difference_2	☑

Checking these fields, will have the effect of making them visible in the Display tab of the query. Depending on the kind of field, it will either be added to the Measures structure, or just be available in the Free section. It is up to you to decide if you want to leave them there, or if you want to have them appear by default in the row or column axis of the ensuing report. It is of course up to you to decide how to proceed, but we would recommend that you move the successor fields from the the 'Free' area of the query to be in the immediate vicinity of the fields they will replace, as below.



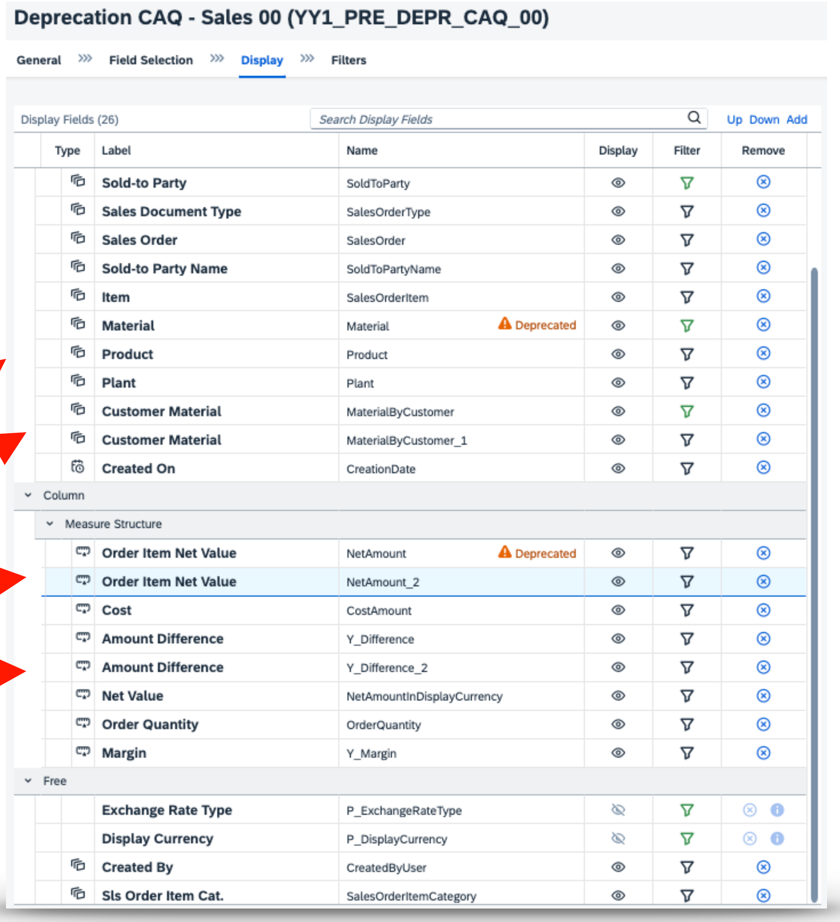
Deprecation CAQ - Sales 00 (YY1_PRE_DEPR_CAQ_00)

General >>> Field Selection >>> Display >>> Filters

Display Fields (26) | Search Display Fields | Up Down Add

Type	Label	Name	Display	Filter	Remove
	Sold-to Party	SoldToParty	👁	▽	⊗
	Sales Document Type	SalesOrderType	👁	▽	⊗
	Sales Order	SalesOrder	👁	▽	⊗
	Sold-to Party Name	SoldToPartyName	👁	▽	⊗
	Item	SalesOrderItem	👁	▽	⊗
	Material	Material ⚠ Deprecated	👁	▽	⊗
	Plant	Plant	👁	▽	⊗
	Customer Material	MaterialByCustomer	👁	▽	⊗
	Created On	CreationDate	👁	▽	⊗
˅ Column					
˅ Measure Structure					
	Order Item Net Value	NetAmount ⚠ Deprecated	👁	▽	⊗
	Cost	CostAmount	👁	▽	⊗
	Amount Difference	Y_Difference	👁	▽	⊗
	Net Value	NetAmountInDisplayCurrency	👁	▽	⊗
	Order Quantity	OrderQuantity	👁	▽	⊗
	Margin	Y_Margin	👁	▽	⊗
	Order Item Net Value	NetAmount_2	👁	▽	⊗
	Amount Difference	Y_Difference_2	👁	▽	⊗
˅ Free					
	Exchange Rate Type	P_ExchangeRateType		▽	⊗ ⓘ
	Display Currency	P_DisplayCurrency		▽	⊗ ⓘ
	Created By	CreatedByUser	👁	▽	⊗
	Sls Order Item Cat.	SalesOrderItemCategory	👁	▽	⊗
	Customer Material	MaterialByCustomer_1	👁	▽	⊗
	Product	Product	👁	▽	⊗

We moved the successor fields in the vicinity of those that will be removed. We have chosen to display Deprecated fields first, Successor fields second. That way, when fields that have the same names are displayed ,we will know which is which in the preview report.



Deprecation CAQ - Sales 00 (YY1_PRE_DEPR_CAQ_00)

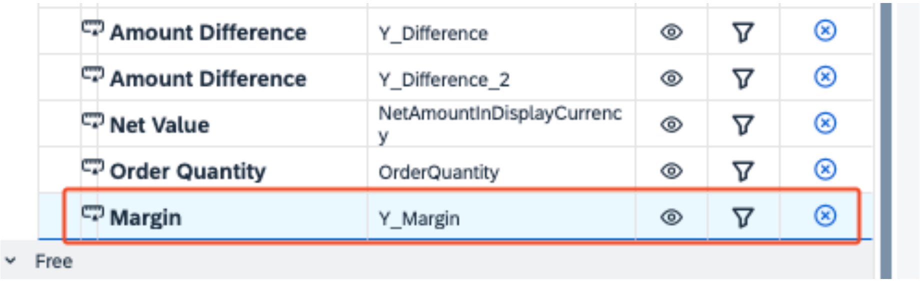
General >>> Field Selection >>> Display >>> Filters

Display Fields (26) | Search Display Fields | Up Down Add

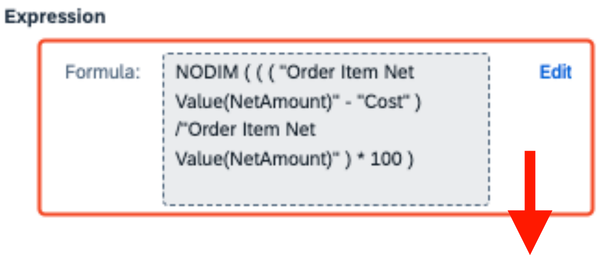
Type	Label	Name	Display	Filter	Remove
	Sold-to Party	SoldToParty	👁	▽	⊗
	Sales Document Type	SalesOrderType	👁	▽	⊗
	Sales Order	SalesOrder	👁	▽	⊗
	Sold-to Party Name	SoldToPartyName	👁	▽	⊗
	Item	SalesOrderItem	👁	▽	⊗
	Material	Material ⚠ Deprecated	👁	▽	⊗
	Product	Product	👁	▽	⊗
	Plant	Plant	👁	▽	⊗
	Customer Material	MaterialByCustomer	👁	▽	⊗
	Customer Material	MaterialByCustomer_1	👁	▽	⊗
	Created On	CreationDate	👁	▽	⊗
˅ Column					
˅ Measure Structure					
	Order Item Net Value	NetAmount ⚠ Deprecated	👁	▽	⊗
	Order Item Net Value	NetAmount_2	👁	▽	⊗
	Cost	CostAmount	👁	▽	⊗
	Amount Difference	Y_Difference	👁	▽	⊗
	Amount Difference	Y_Difference_2	👁	▽	⊗
	Net Value	NetAmountInDisplayCurrency	👁	▽	⊗
	Order Quantity	OrderQuantity	👁	▽	⊗
	Margin	Y_Margin	👁	▽	⊗
˅ Free					
	Exchange Rate Type	P_ExchangeRateType		▽	⊗ ⓘ
	Display Currency	P_DisplayCurrency		▽	⊗ ⓘ
	Created By	CreatedByUser	👁	▽	⊗
	Sls Order Item Cat.	SalesOrderItemCategory	👁	▽	⊗

Lastly, we also need to check the additional fields that we added directly in the query. One such field is the `Margin` field, which is a calculated measure and makes use of the deprecated field `NetAmount`. Because we previously made a full data extract from the custom analytical query before we made any changes, we will directly change the formula here, and replace the deprecated field with the successor field. Using the previous data download to compare with the data produced after we make our changes, will help confirm that our changes are correct.

Note: There will be no error or warning message if your formulas use deprecated fields, nor will you have a message once you have removed the deprecated field from the query, so you need to do this check!

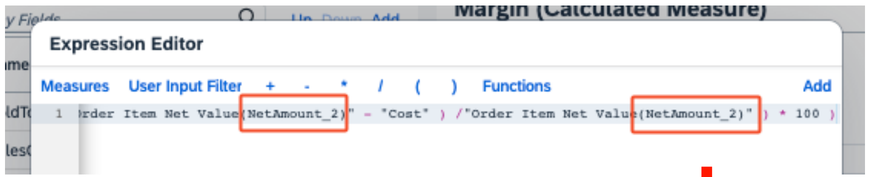


Amount Difference	Y_Difference	👁	▽	⊗
Amount Difference	Y_Difference_2	👁	▽	⊗
Net Value	NetAmountInDisplayCurrency	👁	▽	⊗
Order Quantity	OrderQuantity	👁	▽	⊗
Margin	Y_Margin	👁	▽	⊗



Expression

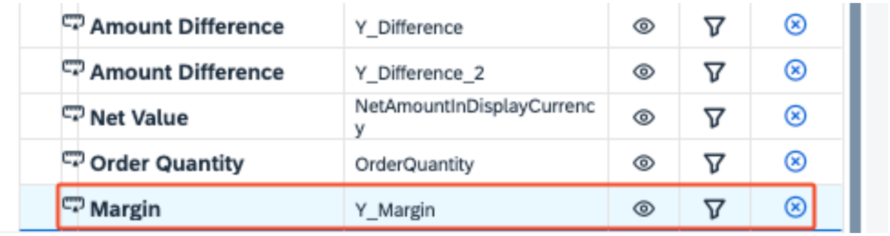
Formula: NODIM ((("Order Item Net Value(NetAmount)" - "Cost") /"Order Item Net Value(NetAmount)") * 100)



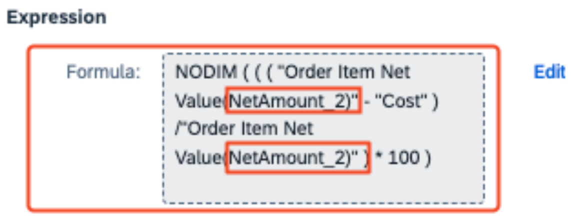
Margin (Calculated Measure)

Expression Editor

```
rder Item Net Value(NetAmount_2)" - "Cost" ) /"Order Item Net Value(NetAmount_2)" ) * 100 )
```



Amount Difference	Y_Difference	👁	▽	⊗
Amount Difference	Y_Difference_2	👁	▽	⊗
Net Value	NetAmountInDisplayCurrency	👁	▽	⊗
Order Quantity	OrderQuantity	👁	▽	⊗
Margin	Y_Margin	👁	▽	⊗



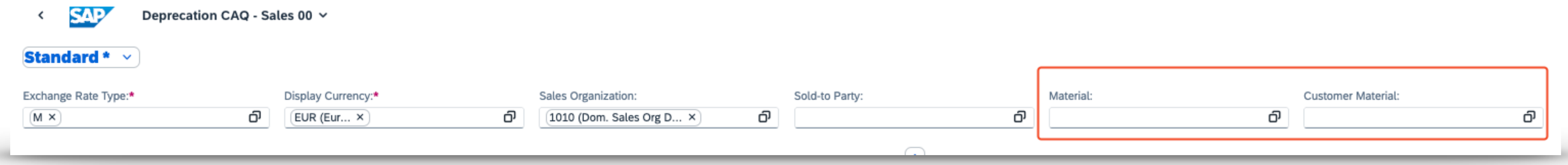
Expression

Formula: NODIM ((("Order Item Net Value(NetAmount_2)" - "Cost") /"Order Item Net Value(NetAmount_2)") * 100)

The formula was amended, and we replaced the deprecated field `NetAmount` and replaced it with the successor field `NetAmount_2`.

Next, before we proceed with saving our changes, we can again look at the layout of our report that we had saved before making changes to make sure we have not missed anything.

Looking at the layout we see that the fields `Material` and `Customer Material` are available as filters. So we must adapt the field properties of the newly added fields so that they can be positioned as filters as well. In addition we also note, that one field has a changed name. Indeed, one of the deprecated fields was the field `Material` and the successor to it is called `Product`. Will this be a problem for the business users ? You therefore have a choice of either keeping the name `Product` and educating the business users as to this change (preferred) or, you can override this label, and choose to continue using `Material`.

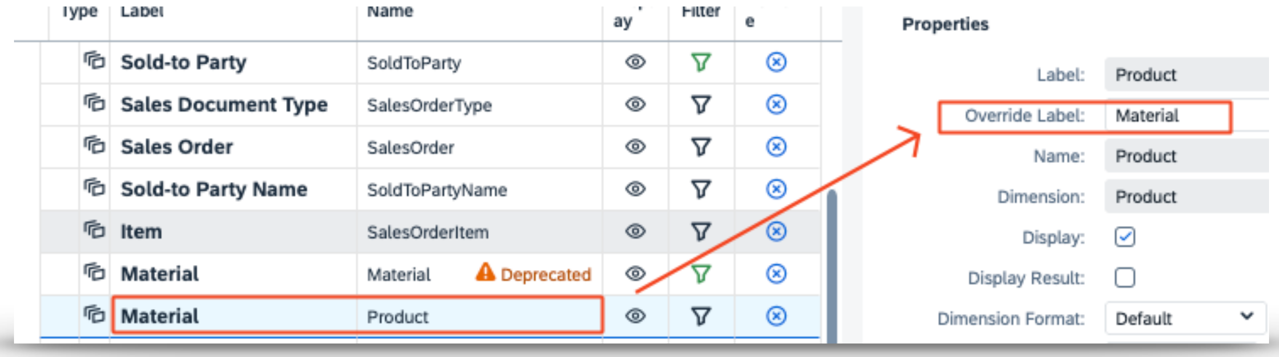


Deprecation CAQ - Sales 00

Standard *

Exchange Rate Type:*	Display Currency:*	Sales Organization:	Sold-to Party:	Material:	Customer Material:
M	EUR (Eur...	1010 (Dom. Sales Org D...			

If you wanted to keep the label `Material`, then you would need in the Display tab of the query, for the field `Product`, to maintain the override label there. In our case though, we will keep the new term `Product`, and as part of change management activities, let our users know of the wording change.

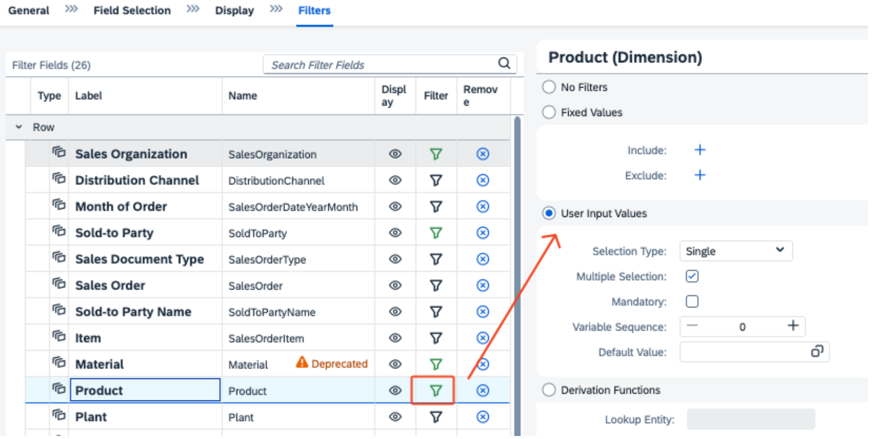


Type	Label	Name	ay	Filter	e
	Sold-to Party	SoldToParty	👁	▽	⊗
	Sales Document Type	SalesOrderType	👁	▽	⊗
	Sales Order	SalesOrder	👁	▽	⊗
	Sold-to Party Name	SoldToPartyName	👁	▽	⊗
	Item	SalesOrderItem	👁	▽	⊗
	Material	Material ⚠ Deprecated	👁	▽	⊗
	Material	Product	👁	▽	⊗

Properties

Label:	Product
Override Label:	Material
Name:	Product
Dimension:	Product
Display:	☑
Display Result:	□
Dimension Format:	Default

We now just need to position the new successor fields `Product` and `Customer Material` as filters, and remove the deprecated fields `Material` and `Customer Material` from the filters. For this we need to go to the Filters tab of the query.



General »» Field Selection »» Display »» Filters

Filter Fields (26) | Search Filter Fields

	Type	Label	Name	Display	Filter	Remove
⌄ Row						
	⧉	Sales Organization	SalesOrganization	👁	▽	⊗
	⧉	Distribution Channel	DistributionChannel	👁	▽	⊗
	⧉	Month of Order	SalesOrderDateYearMonth	👁	▽	⊗
	⧉	Sold-to Party	SoldToParty	👁	▽	⊗
	⧉	Sales Document Type	SalesOrderType	👁	▽	⊗
	⧉	Sales Order	SalesOrder	👁	▽	⊗
	⧉	Sold-to Party Name	SoldToPartyName	👁	▽	⊗
	⧉	Item	SalesOrderItem	👁	▽	⊗
	⧉	Material	Material ⚠ Deprecated	👁	▽	⊗
	⧉	Product	Product	👁	▽	⊗
	⧉	Plant	Plant	👁	▽	⊗

Product (Dimension)

○ No Filters

○ Fixed Values

Include: +

Exclude: +

● User Input Values

Selection Type: Single

Multiple Selection: ☑

Mandatory: □

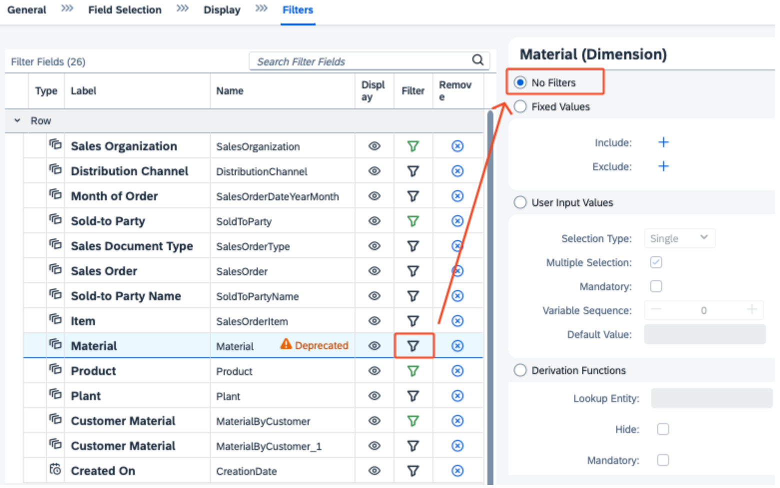
Variable Sequence: − 0 +

Default Value:

○ Derivation Functions

Lookup Entity:

We made the new successor fields `Product` and `Customer Material` filters, to replace the to be removed fields, and at the same time removed the filtering property from the deprecated fields `Material` and `Customer Material`.



General »» Field Selection »» Display »» Filters

Filter Fields (26) | Search Filter Fields

	Type	Label	Name	Display	Filter	Remove
⌄ Row						
	⧉	Sales Organization	SalesOrganization	👁	▽	⊗
	⧉	Distribution Channel	DistributionChannel	👁	▽	⊗
	⧉	Month of Order	SalesOrderDateYearMonth	👁	▽	⊗
	⧉	Sold-to Party	SoldToParty	👁	▽	⊗
	⧉	Sales Document Type	SalesOrderType	👁	▽	⊗
	⧉	Sales Order	SalesOrder	👁	▽	⊗
	⧉	Sold-to Party Name	SoldToPartyName	👁	▽	⊗
	⧉	Item	SalesOrderItem	👁	▽	⊗
	⧉	Material	Material ⚠ Deprecated	👁	▽	⊗
	⧉	Product	Product	👁	▽	⊗
	⧉	Plant	Plant	👁	▽	⊗
	⧉	Customer Material	MaterialByCustomer	👁	▽	⊗
	⧉	Customer Material	MaterialByCustomer_1	👁	▽	⊗
	📅	Created On	CreationDate	👁	▽	⊗

Material (Dimension)

● No Filters

○ Fixed Values

Include: +

Exclude: +

○ User Input Values

Selection Type: Single

Multiple Selection: ☑

Mandatory: □

Variable Sequence: − 0 +

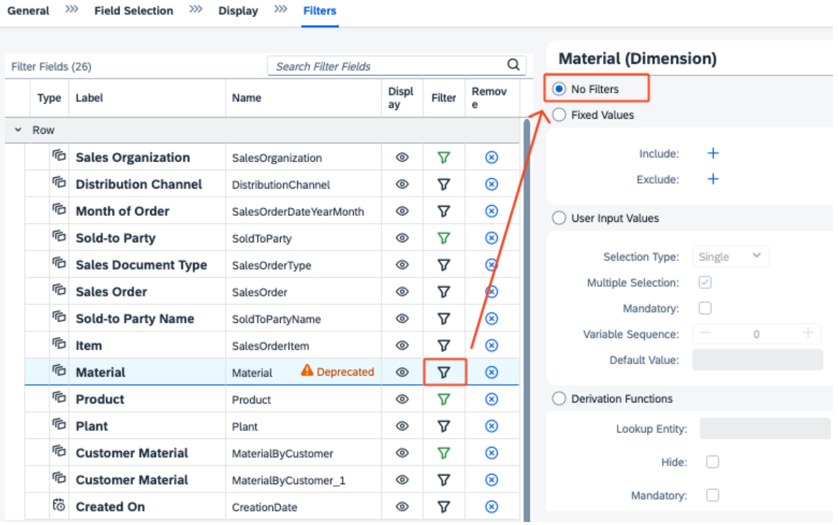
Default Value:

○ Derivation Functions

Lookup Entity:

Hide: □

Mandatory: □



General »» Field Selection »» Display »» Filters

Filter Fields (26) | Search Filter Fields

	Type	Label	Name	Display	Filter	Remove
⌄ Row						
	⧉	Sales Organization	SalesOrganization	👁	▽	⊗
	⧉	Distribution Channel	DistributionChannel	👁	▽	⊗
	⧉	Month of Order	SalesOrderDateYearMonth	👁	▽	⊗
	⧉	Sold-to Party	SoldToParty	👁	▽	⊗
	⧉	Sales Document Type	SalesOrderType	👁	▽	⊗
	⧉	Sales Order	SalesOrder	👁	▽	⊗
	⧉	Sold-to Party Name	SoldToPartyName	👁	▽	⊗
	⧉	Item	SalesOrderItem	👁	▽	⊗
	⧉	Material	Material ⚠ Deprecated	👁	▽	⊗
	⧉	Product	Product	👁	▽	⊗
	⧉	Plant	Plant	👁	▽	⊗
	⧉	Customer Material	MaterialByCustomer	👁	▽	⊗
	⧉	Customer Material	MaterialByCustomer_1	👁	▽	⊗
	📅	Created On	CreationDate	👁	▽	⊗

Material (Dimension)

● No Filters

○ Fixed Values

Include: +

Exclude: +

○ User Input Values

Selection Type: Single

Multiple Selection: ☑

Mandatory: □

Variable Sequence: − 0 +

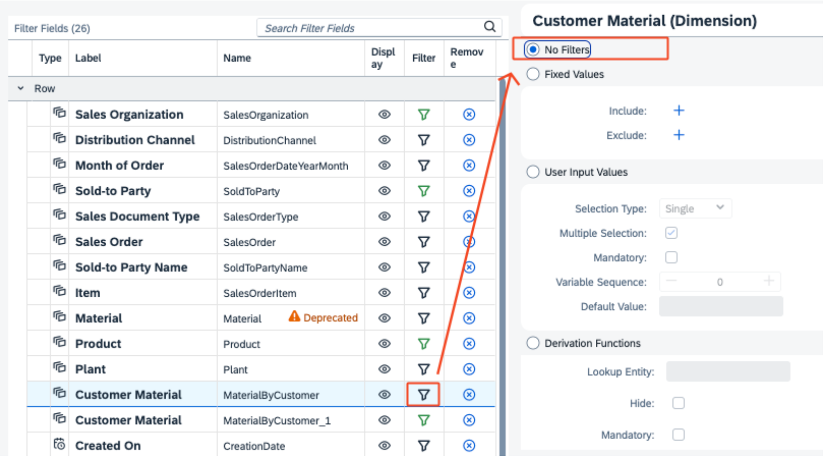
Default Value:

○ Derivation Functions

Lookup Entity:

Hide: □

Mandatory: □



Filter Fields (26) | Search Filter Fields

	Type	Label	Name	Display	Filter	Remove
⌄ Row						
	⧉	Sales Organization	SalesOrganization	👁	▽	⊗
	⧉	Distribution Channel	DistributionChannel	👁	▽	⊗
	⧉	Month of Order	SalesOrderDateYearMonth	👁	▽	⊗
	⧉	Sold-to Party	SoldToParty	👁	▽	⊗
	⧉	Sales Document Type	SalesOrderType	👁	▽	⊗
	⧉	Sales Order	SalesOrder	👁	▽	⊗
	⧉	Sold-to Party Name	SoldToPartyName	👁	▽	⊗
	⧉	Item	SalesOrderItem	👁	▽	⊗
	⧉	Material	Material ⚠ Deprecated	👁	▽	⊗
	⧉	Product	Product	👁	▽	⊗
	⧉	Plant	Plant	👁	▽	⊗
	⧉	Customer Material	MaterialByCustomer	👁	▽	⊗
	⧉	Customer Material	MaterialByCustomer_1	👁	▽	⊗
	📅	Created On	CreationDate	👁	▽	⊗

Customer Material (Dimension)

● No Filters

○ Fixed Values

Include: +

Exclude: +

○ User Input Values

Selection Type: Single

Multiple Selection: ☑

Mandatory: □

Variable Sequence: − 0 +

Default Value:

○ Derivation Functions

Lookup Entity:

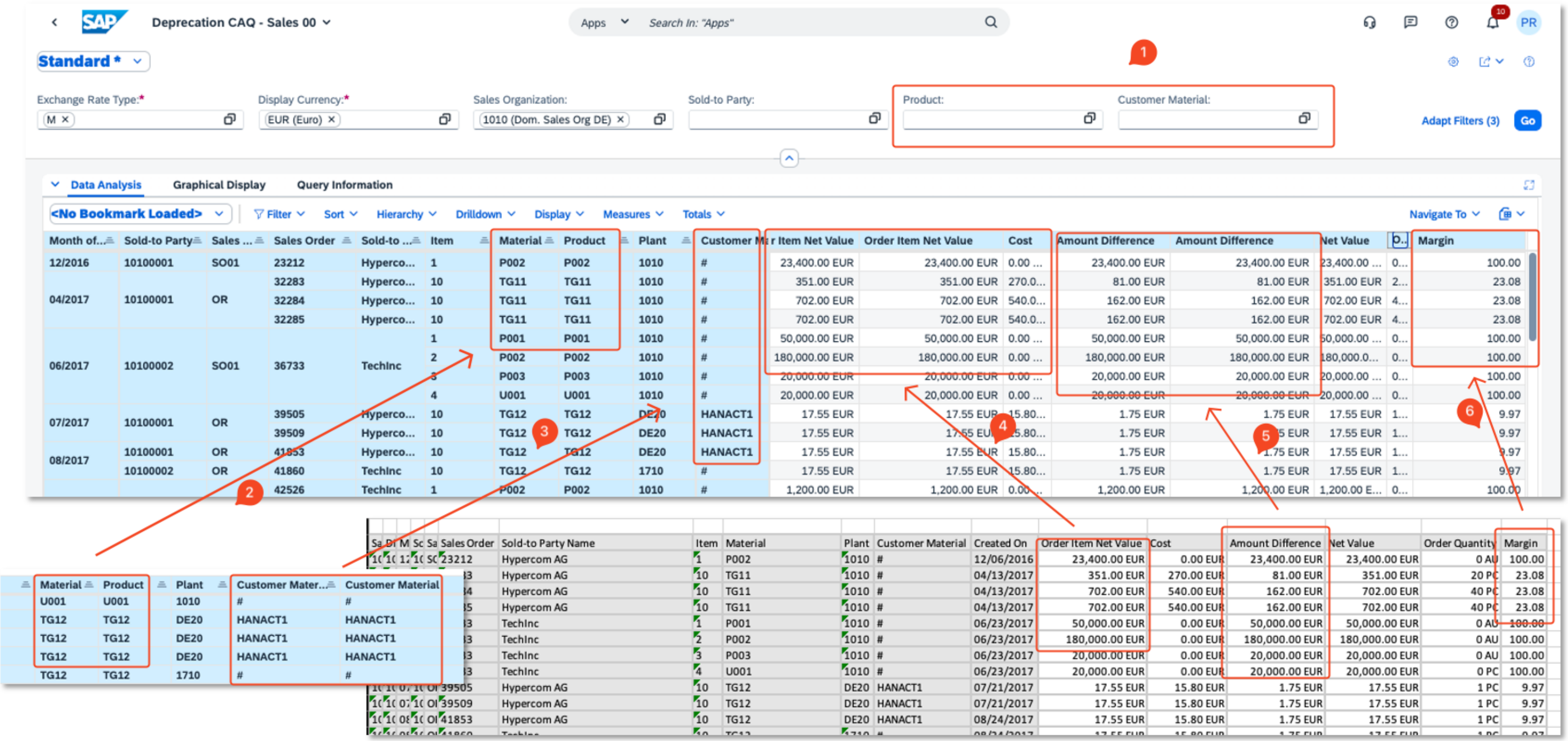
Hide: □

Mandatory: □

Now that we have processed all the changes (except removal of the deprecated fields), we can save our query, publish it, preview the data and compare both the layout and content, to make sure the data that will be offered to the business users is still as expected. Comparing our data preview, with the excel download we had done before making the changes we can see that we are still serving up the same data.

1. The same filters are available
2. The `Product` and `Material` field provide the same data
3. The `Customer Material` fields provide the same data
4. The `NetAmount` and `NetAmount_2` fields provide the same data
5. The `Amount Difference` fields provide the same data (these fields came from the Custom CDS)
6. The `Margin` field, for which we changed the formula, calculates the same value

It appears our changes are correct.



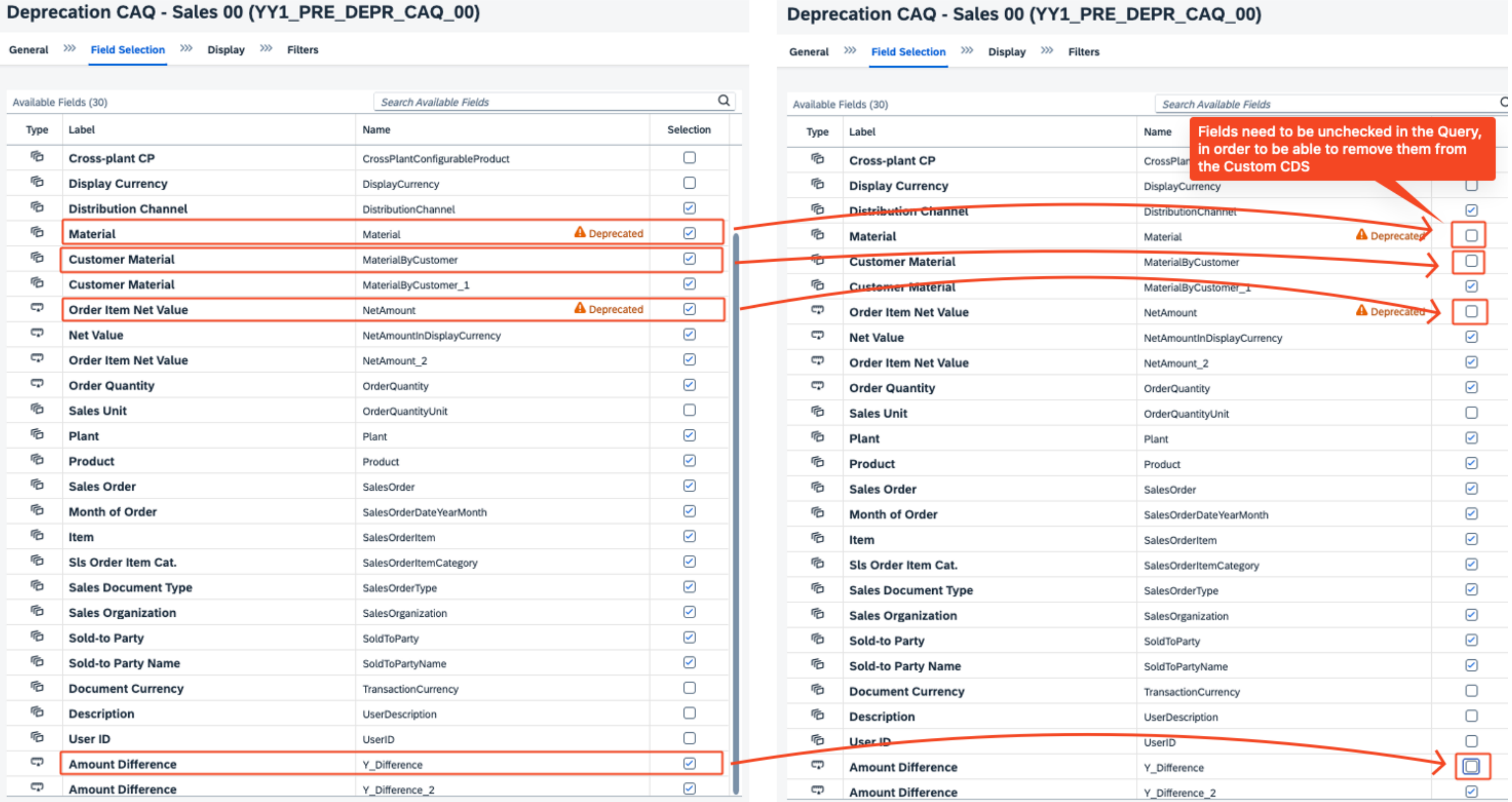
Exchange Rate Type:* M ×
Display Currency:* EUR (Euro) ×
Sales Organization: 1010 (Dom. Sales Org DE) ×
Sold-to Party:
Product:
Customer Material:

Month of...	Sold-to Party	Sales ...	Sales Order	Sold-to ...	Item	Material	Product	Plant	Customer M	r Item Net Value	Order Item Net Value	Cost	Amount Difference	Amount Difference	Net Value	O...	Margin
12/2016	10100001	SO01	23212	Hyperco...	1	P002	P002	1010	#	23,400.00 EUR	23,400.00 EUR	0.00 ...	23,400.00 EUR	23,400.00 EUR	23,400.00 ...	0...	100.00
04/2017	10100001	OR	32283	Hyperco...	10	TG11	TG11	1010	#	351.00 EUR	351.00 EUR	270.0...	81.00 EUR	81.00 EUR	351.00 EUR	2...	23.08
			32284	Hyperco...	10	TG11	TG11	1010	#	702.00 EUR	702.00 EUR	540.0...	162.00 EUR	162.00 EUR	702.00 EUR	4...	23.08
			32285	Hyperco...	10	TG11	TG11	1010	#	702.00 EUR	702.00 EUR	540.0...	162.00 EUR	162.00 EUR	702.00 EUR	4...	23.08
06/2017	10100002	SO01	36733	TechInc	1	P001	P001	1010	#	50,000.00 EUR	50,000.00 EUR	0.00 ...	50,000.00 EUR	50,000.00 EUR	50,000.00 ...	0...	100.00
					2	P002	P002	1010	#	180,000.00 EUR	180,000.00 EUR	0.00 ...	180,000.00 EUR	180,000.00 EUR	180,000.0...	0...	100.00
					3	P003	P003	1010	#	20,000.00 EUR	20,000.00 EUR	0.00 ...	20,000.00 EUR	20,000.00 EUR	20,000.00 ...	0...	100.00
					4	U001	U001	1010	#	20,000.00 EUR	20,000.00 EUR	0.00 ...	20,000.00 EUR	20,000.00 EUR	20,000.00 ...	0...	100.00
07/2017	10100001	OR	39505	Hyperco...	10	TG12	TG12	DE20	HANACT1	17.55 EUR	17.55 EUR	15.80...	1.75 EUR	1.75 EUR	17.55 EUR	1...	9.97
			39509	Hyperco...	10	TG12	TG12	DE20	HANACT1	17.55 EUR	17.55 EUR	15.80...	1.75 EUR	1.75 EUR	17.55 EUR	1...	9.97
08/2017	10100001	OR	41853	Hyperco...	10	TG12	TG12	DE20	HANACT1	17.55 EUR	17.55 EUR	15.80...	1.75 EUR	1.75 EUR	17.55 EUR	1...	9.97
	10100002	OR	41860	TechInc	10	TG12	TG12	1710	#	17.55 EUR	17.55 EUR	15.80...	1.75 EUR	1.75 EUR	17.55 EUR	1...	9.97
			42526	TechInc	1	P002	P002	1010	#	1,200.00 EUR	1,200.00 EUR	0.00 ...	1,200.00 EUR	1,200.00 EUR	1,200.00 E...	0...	100.00

	Material	Product		Plant	Customer Mater...	Customer Material
	U001	U001		1010	#	#
	TG12	TG12		DE20	HANACT1	HANACT1
	TG12	TG12		DE20	HANACT1	HANACT1
	TG12	TG12		DE20	HANACT1	HANACT1
	TG12	TG12		1710	#	#

Sa	Di	M	Sc	Sa	Sales Order	Sold-to Party Name	Item	Material	Plant	Customer Material	Created On	Order Item Net Value	Cost	Amount Difference	Net Value	Order Quantity	Margin
1(	1(	1:	1(	S(	23212	Hypercom AG	1	P002	1010	#	12/06/2016	23,400.00 EUR	0.00 EUR	23,400.00 EUR	23,400.00 EUR	0 AU	100.00
					33	Hypercom AG	10	TG11	1010	#	04/13/2017	351.00 EUR	270.00 EUR	81.00 EUR	351.00 EUR	20 PC	23.08
					34	Hypercom AG	10	TG11	1010	#	04/13/2017	702.00 EUR	540.00 EUR	162.00 EUR	702.00 EUR	40 PC	23.08
					35	Hypercom AG	10	TG11	1010	#	04/13/2017	702.00 EUR	540.00 EUR	162.00 EUR	702.00 EUR	40 PC	23.08
					33	TechInc	1	P001	1010	#	06/23/2017	50,000.00 EUR	0.00 EUR	50,000.00 EUR	50,000.00 EUR	0 AU	100.00
					33	TechInc	2	P002	1010	#	06/23/2017	180,000.00 EUR	0.00 EUR	180,000.00 EUR	180,000.00 EUR	0 AU	100.00
					33	TechInc	3	P003	1010	#	06/23/2017	20,000.00 EUR	0.00 EUR	20,000.00 EUR	20,000.00 EUR	0 AU	100.00
					33	TechInc	4	U001	1010	#	06/23/2017	20,000.00 EUR	0.00 EUR	20,000.00 EUR	20,000.00 EUR	0 PC	100.00
1(	1(	0;	1(	OI	39505	Hypercom AG	10	TG12	DE20	HANACT1	07/21/2017	17.55 EUR	15.80 EUR	1.75 EUR	17.55 EUR	1 PC	9.97
1(	1(	0;	1(	OI	39509	Hypercom AG	10	TG12	DE20	HANACT1	07/21/2017	17.55 EUR	15.80 EUR	1.75 EUR	17.55 EUR	1 PC	9.97
1(	1(	08	1(	OI	41853	Hypercom AG	10	TG12	DE20	HANACT1	08/24/2017	17.55 EUR	15.80 EUR	1.75 EUR	17.55 EUR	1 PC	9.97
1(	1(	08	1(	OI	41860	TechInc	10	TG12	1710	#	08/24/2017	17.55 EUR	15.80 EUR	1.75 EUR	17.55 EUR	1 PC	9.97

We can now go back to the query and uncheck from it, all the fields that we no longer want to see in it (remember, we are wanting to remove their use in the query, so that we may remove them from the custom CDS). So let's go back to the query in edit mode and uncheck from the Field Selection tab, all the deprecated and replaced fields. Doing so will automatically also removed them from wherever they are used in the display tab (in the Row, Column or free section). Once we are done, we can once again, save our changes and publish the query. You can also preview the data again, which should this time be a mirror image of your report, before you made any changes.



Deprecation CAQ - Sales 00 (YY1_PRE_DEPR_CAQ_00)

Available Fields (30)

Type	Label	Name	Selection
	Cross-plant CP	CrossPlantConfigurableProduct	☐
	Display Currency	DisplayCurrency	☐
	Distribution Channel	DistributionChannel	☑
	Material	Material ⚠ Deprecated	☑
	Customer Material	MaterialByCustomer	☑
	Customer Material	MaterialByCustomer_1	☑
	Order Item Net Value	NetAmount ⚠ Deprecated	☑
	Net Value	NetAmountInDisplayCurrency	☑
	Order Item Net Value	NetAmount_2	☑
	Order Quantity	OrderQuantity	☑
	Sales Unit	OrderQuantityUnit	☐
	Plant	Plant	☑
	Product	Product	☑
	Sales Order	SalesOrder	☑
	Month of Order	SalesOrderDateYearMonth	☑
	Item	SalesOrderItem	☑
	Sls Order Item Cat.	SalesOrderItemCategory	☑
	Sales Document Type	SalesOrderType	☑
	Sales Organization	SalesOrganization	☑
	Sold-to Party	SoldToParty	☑
	Sold-to Party Name	SoldToPartyName	☑
	Document Currency	TransactionCurrency	☐
	Description	UserDescription	☐
	User ID	UserID	☐
	Amount Difference	Y_Difference	☑
	Amount Difference	Y_Difference_2	☑

Deprecation CAQ - Sales 00 (YY1_PRE_DEPR_CAQ_00)

Available Fields (30)

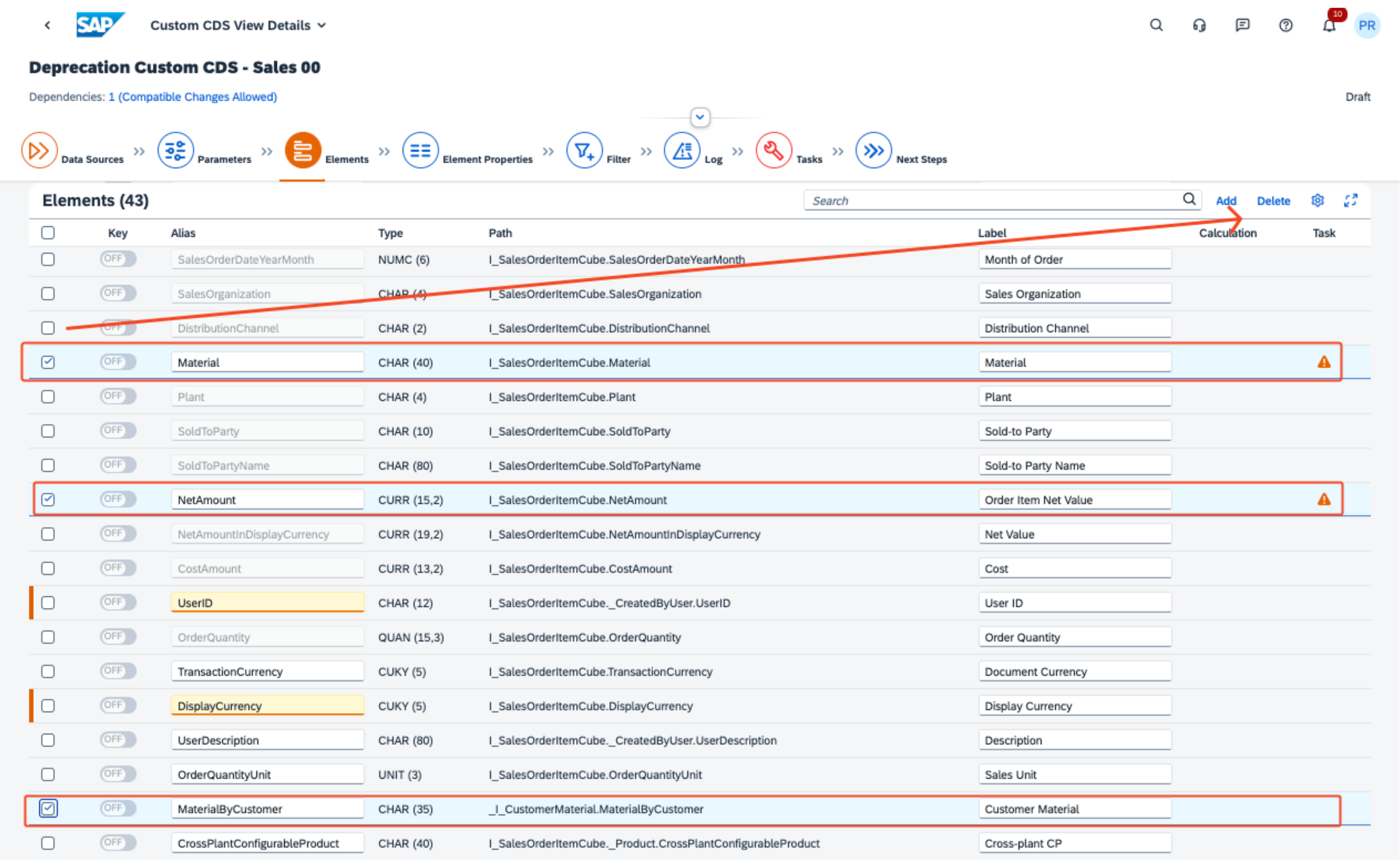
Fields need to be unchecked in the Query, in order to be able to remove them from the Custom CDS

Type	Label	Name	
	Cross-plant CP	CrossPlan	
	Display Currency	DisplayCurrency	☐
	Distribution Channel	DistributionChannel	☑
	Material	Material ⚠ Deprecated	☐
	Customer Material	MaterialByCustomer	☐
	Customer Material	MaterialByCustomer_1	☑
	Order Item Net Value	NetAmount ⚠ Deprecated	☐
	Net Value	NetAmountInDisplayCurrency	☑
	Order Item Net Value	NetAmount_2	☑
	Order Quantity	OrderQuantity	☑
	Sales Unit	OrderQuantityUnit	☐
	Plant	Plant	☑
	Product	Product	☑
	Sales Order	SalesOrder	☑
	Month of Order	SalesOrderDateYearMonth	☑
	Item	SalesOrderItem	☑
	Sls Order Item Cat.	SalesOrderItemCategory	☑
	Sales Document Type	SalesOrderType	☑
	Sales Organization	SalesOrganization	☑
	Sold-to Party	SoldToParty	☑
	Sold-to Party Name	SoldToPartyName	☑
	Document Currency	TransactionCurrency	☐
	Description	UserDescription	☐
	User ID	UserID	☐
	Amount Difference	Y_Difference	☐
	Amount Difference	Y_Difference_2	☑

Now that the query has been fully updated and changed, we might be tempted to now go back to the custom CDS and remove all the fields that are deprecated and causing for rework task messages to be displayed. Indeed, if we go to the custom CDS, and switch to edit mode, we can see the deprecated fields (and generally those that we want to remove), can now be deleted from the custom CDS - that is because they are no longer used by the query. This is also what I meant earlier when I referred to hard and loose coupling. I.e these fields are still used in the eSAC story, but that is not stopping me from deleting them here and now!

So at this point, let's leave the fields in the Custom CDS. Cancel switching to edit mode and discard the draft on the custom CDS.

We will delete those fields at the very end.



Deprecation Custom CDS - Sales 00

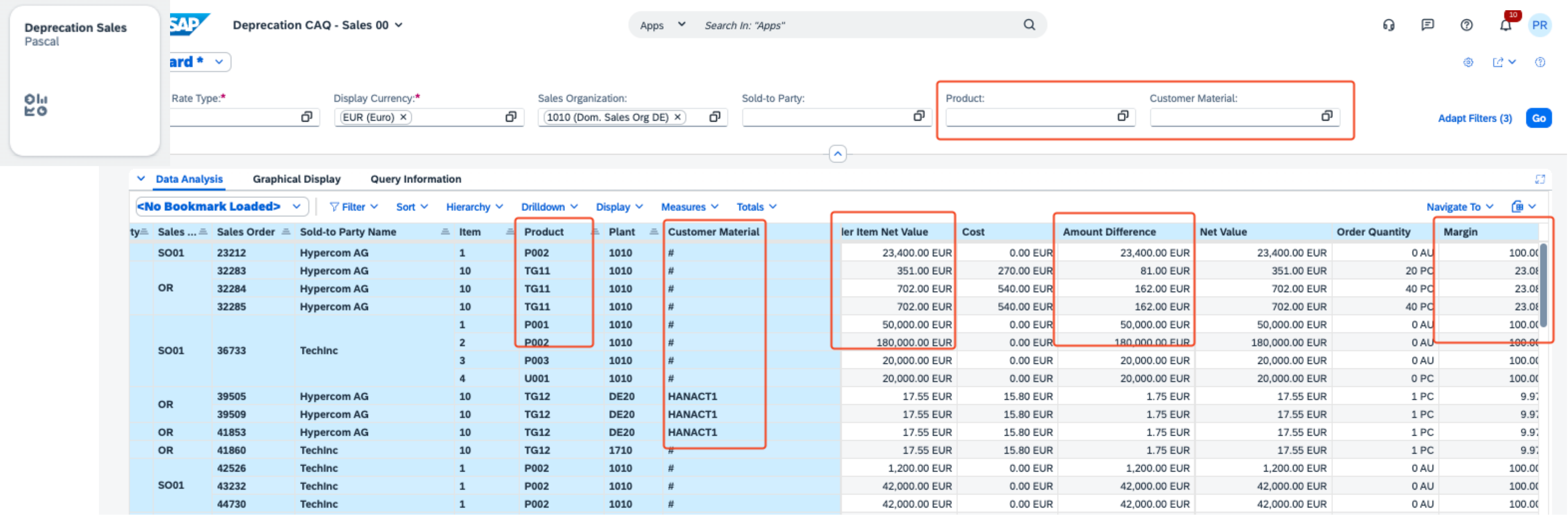
Dependencies: 1 (Compatible Changes Allowed)

Elements (43)

□	Key	Alias	Type	Path	Label	Calculation	Task
□	OFF	SalesOrderDateYearMonth	NUMC (6)	I_SalesOrderItemCube.SalesOrderDateYearMonth	Month of Order		
□	OFF	SalesOrganization	CHAR (4)	I_SalesOrderItemCube.SalesOrganization	Sales Organization		
□	OFF	DistributionChannel	CHAR (2)	I_SalesOrderItemCube.DistributionChannel	Distribution Channel		
☑	OFF	Material	CHAR (40)	I_SalesOrderItemCube.Material	Material		⚠
□	OFF	Plant	CHAR (4)	I_SalesOrderItemCube.Plant	Plant		
□	OFF	SoldToParty	CHAR (10)	I_SalesOrderItemCube.SoldToParty	Sold-to Party		
□	OFF	SoldToPartyName	CHAR (80)	I_SalesOrderItemCube.SoldToPartyName	Sold-to Party Name		
☑	OFF	NetAmount	CURR (15,2)	I_SalesOrderItemCube.NetAmount	Order Item Net Value		⚠
□	OFF	NetAmountInDisplayCurrency	CURR (19,2)	I_SalesOrderItemCube.NetAmountInDisplayCurrency	Net Value		
□	OFF	CostAmount	CURR (13,2)	I_SalesOrderItemCube.CostAmount	Cost		
□	OFF	UserID	CHAR (12)	I_SalesOrderItemCube._CreatedByUser.UserID	User ID		
□	OFF	OrderQuantity	QUAN (15,3)	I_SalesOrderItemCube.OrderQuantity	Order Quantity		
□	OFF	TransactionCurrency	CUKY (5)	I_SalesOrderItemCube.TransactionCurrency	Document Currency		
□	OFF	DisplayCurrency	CUKY (5)	I_SalesOrderItemCube.DisplayCurrency	Display Currency		
□	OFF	UserDescription	CHAR (80)	I_SalesOrderItemCube._CreatedByUser.UserDescription	Description		
□	OFF	OrderQuantityUnit	UNIT (3)	I_SalesOrderItemCube.OrderQuantityUnit	Sales Unit		
☑	OFF	MaterialByCustomer	CHAR (35)	_I_CustomerMaterial.MaterialByCustomer	Customer Material		
□	OFF	CrossPlantConfigurableProduct	CHAR (40)	I_SalesOrderItemCube._Product.CrossPlantConfigurableProduct	Cross-plant CP		

Step 4 - Amending the Query report - Multi Dimensional Report

Actually, we don't need to do anything here. The custom analytical query, we had previously exposed as a multidimensional report (using the Manage KPI & Reports) application, which we then exposed as a tile on the Fiori Launchpad, by doing a custom catalog extension was already changed, when I changed the Query. So if I click on the tile that is on the Fiori Launchpad, I should then in theory launch a report that is in effect identical to the preview we saw in the custom analytical query! So let's try it. Indeed we can see that our report works as expected. However, note that some report variants may need to be reworked if the old removed fields were used in them.



Rate Type:*

Display Currency:* EUR (Euro)

Sales Organization: 1010 (Dom. Sales Org DE)

Sold-to Party:

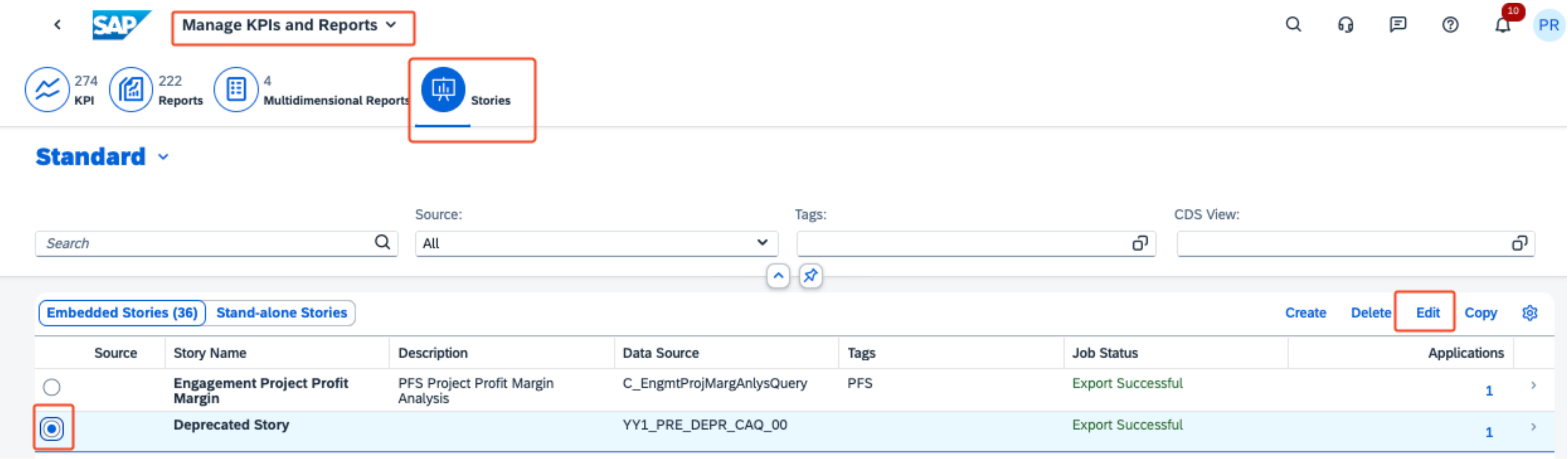
Product:

Customer Material:

ty	Sales ...	Sales Order	Sold-to Party Name	Item	Product	Plant	Customer Material	ler Item Net Value	Cost	Amount Difference	Net Value	Order Quantity	Margin
	SO01	23212	Hypercom AG	1	P002	1010	#	23,400.00 EUR	0.00 EUR	23,400.00 EUR	23,400.00 EUR	0 AU	100.0
	OR	32283	Hypercom AG	10	TG11	1010	#	351.00 EUR	270.00 EUR	81.00 EUR	351.00 EUR	20 PC	23.0
		32284	Hypercom AG	10	TG11	1010	#	702.00 EUR	540.00 EUR	162.00 EUR	702.00 EUR	40 PC	23.0
		32285	Hypercom AG	10	TG11	1010	#	702.00 EUR	540.00 EUR	162.00 EUR	702.00 EUR	40 PC	23.0
	SO01	36733	TechInc	1	P001	1010	#	50,000.00 EUR	0.00 EUR	50,000.00 EUR	50,000.00 EUR	0 AU	100.0
				2	P002	1010	#	180,000.00 EUR	0.00 EUR	180,000.00 EUR	180,000.00 EUR	0 AU	100.0
				3	P003	1010	#	20,000.00 EUR	0.00 EUR	20,000.00 EUR	20,000.00 EUR	0 AU	100.0
				4	U001	1010	#	20,000.00 EUR	0.00 EUR	20,000.00 EUR	20,000.00 EUR	0 PC	100.0
	OR	39505	Hypercom AG	10	TG12	DE20	HANACT1	17.55 EUR	15.80 EUR	1.75 EUR	17.55 EUR	1 PC	9.9
		39509	Hypercom AG	10	TG12	DE20	HANACT1	17.55 EUR	15.80 EUR	1.75 EUR	17.55 EUR	1 PC	9.9
	OR	41853	Hypercom AG	10	TG12	DE20	HANACT1	17.55 EUR	15.80 EUR	1.75 EUR	17.55 EUR	1 PC	9.9
	OR	41860	TechInc	10	TG12	1710	#	17.55 EUR	15.80 EUR	1.75 EUR	17.55 EUR	1 PC	9.9
	SO01	42526	TechInc	1	P002	1010	#	1,200.00 EUR	0.00 EUR	1,200.00 EUR	1,200.00 EUR	0 AU	100.0
		43232	TechInc	1	P002	1010	#	42,000.00 EUR	0.00 EUR	42,000.00 EUR	42,000.00 EUR	0 AU	100.0
		44730	TechInc	1	P002	1010	#	42,000.00 EUR	0.00 EUR	42,000.00 EUR	42,000.00 EUR	0 AU	100.0

Step 5 - Amending the Embedded SAC story

We now go to the Manage KPIs & Reports app, go the Stories tab, select our story and click Edit.



Manage KPIs and Reports

274 KPI | 222 Reports | 4 Multidimensional Reports | Stories

Standard

Search

Source: All

Tags:

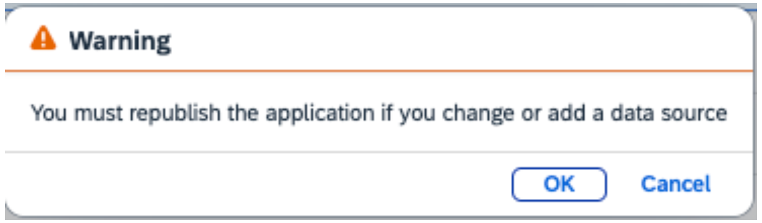
CDS View:

Embedded Stories (36) | Stand-alone Stories

Create | Delete | Edit | Copy

	Source	Story Name	Description	Data Source	Tags	Job Status	Applications
○		Engagement Project Profit Margin	PFS Project Profit Margin Analysis	C_EngmtProjMargAnlysQuery	PFS	Export Successful	1
●		Deprecated Story		YY1_PRE_DEPR_CAQ_00		Export Successful	1

Doing so will open a warning pop-up making you aware of having to republish the application if you change or add a data source. We click OK to proceed. Once past this screen, the eSAC story will load.

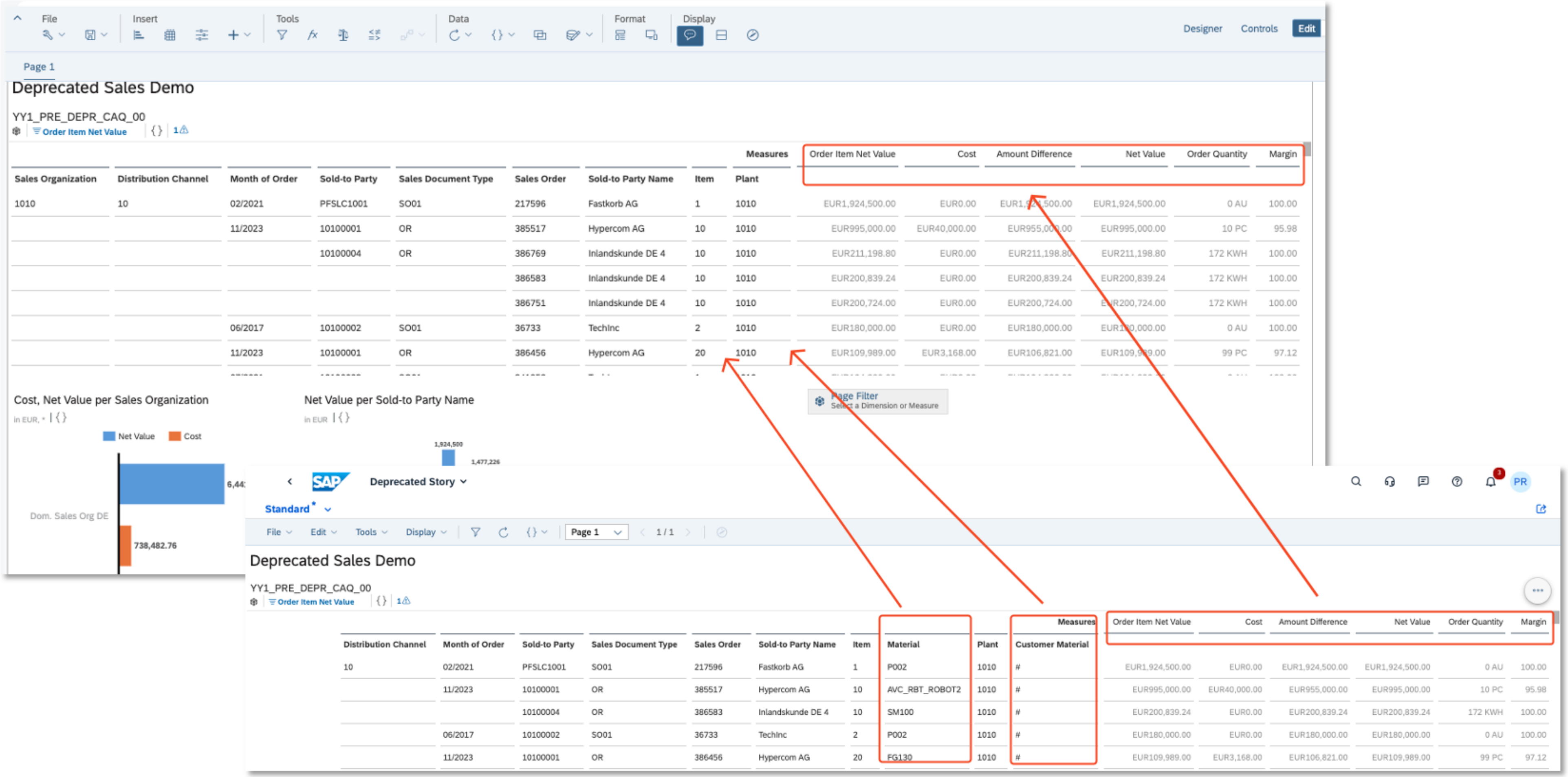


Warning

You must republish the application if you change or add a data source

OK | Cancel

Once the eSAC story launches (top) , and compare it to a previously saved (bottom) screenshot (before making any changes), we can see that something is wrong. Whilst the measures seem to all be there, we can immediately see that the `Material` and `Customer Material` columns are not in the tabular report view, and thus we need to add them back in the report.



Deprecated Sales Demo

YY1_PRE_DEPR_CAQ_00

Order Item Net Value | { } | 1

Sales Organization	Distribution Channel	Month of Order	Sold-to Party	Sales Document Type	Sales Order	Sold-to Party Name	Item	Plant	Order Item Net Value	Cost	Amount Difference	Net Value	Order Quantity	Margin
1010	10	02/2021	PFSLC1001	SO01	217596	Fastkorb AG	1	1010	EUR1,924,500.00	EUR0.00	EUR1,924,500.00	EUR1,924,500.00	0 AU	100.00
		11/2023	10100001	OR	385517	Hypercom AG	10	1010	EUR995,000.00	EUR40,000.00	EUR955,000.00	EUR995,000.00	10 PC	95.98
			10100004	OR	386769	Inlandskunde DE 4	10	1010	EUR211,198.80	EUR0.00	EUR211,198.80	EUR211,198.80	172 KWH	100.00
					386583	Inlandskunde DE 4	10	1010	EUR200,839.24	EUR0.00	EUR200,839.24	EUR200,839.24	172 KWH	100.00
					386751	Inlandskunde DE 4	10	1010	EUR200,724.00	EUR0.00	EUR200,724.00	EUR200,724.00	172 KWH	100.00
		06/2017	10100002	SO01	36733	TechInc	2	1010	EUR180,000.00	EUR0.00	EUR180,000.00	EUR180,000.00	0 AU	100.00
		11/2023	10100001	OR	386456	Hypercom AG	20	1010	EUR109,989.00	EUR3,168.00	EUR106,821.00	EUR109,989.00	99 PC	97.12

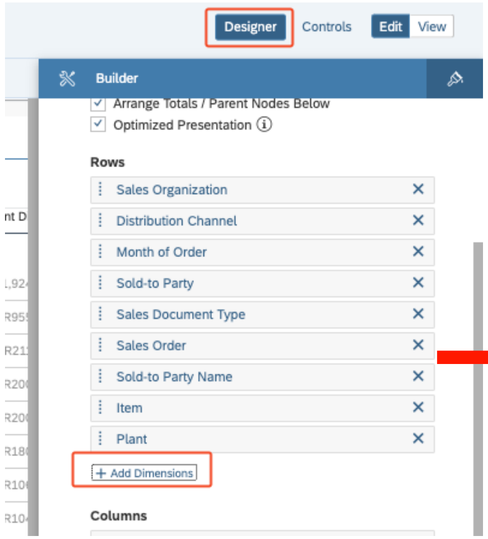
Deprecated Sales Demo

YY1_PRE_DEPR_CAQ_00

Order Item Net Value | { } | 1

Distribution Channel	Month of Order	Sold-to Party	Sales Document Type	Sales Order	Sold-to Party Name	Item	Material	Plant	Customer Material	Order Item Net Value	Cost	Amount Difference	Net Value	Order Quantity	Margin
10	02/2021	PFSLC1001	SO01	217596	Fastkorb AG	1	P002	1010	#	EUR1,924,500.00	EUR0.00	EUR1,924,500.00	EUR1,924,500.00	0 AU	100.00
	11/2023	10100001	OR	385517	Hypercom AG	10	AVC_RBT_ROBOT2	1010	#	EUR995,000.00	EUR40,000.00	EUR955,000.00	EUR995,000.00	10 PC	95.98
		10100004	OR	386583	Inlandskunde DE 4	10	SM100	1010	#	EUR200,839.24	EUR0.00	EUR200,839.24	EUR200,839.24	172 KWH	100.00
	06/2017	10100002	SO01	36733	TechInc	2	P002	1010	#	EUR180,000.00	EUR0.00	EUR180,000.00	EUR180,000.00	0 AU	100.00
	11/2023	10100001	OR	386456	Hypercom AG	20	FG130	1010	#	EUR109,989.00	EUR3,168.00	EUR106,821.00	EUR109,989.00	99 PC	97.12

We therefore select the report and in designer mode, we add the missing dimensions and place them in the correct order, as they were before.



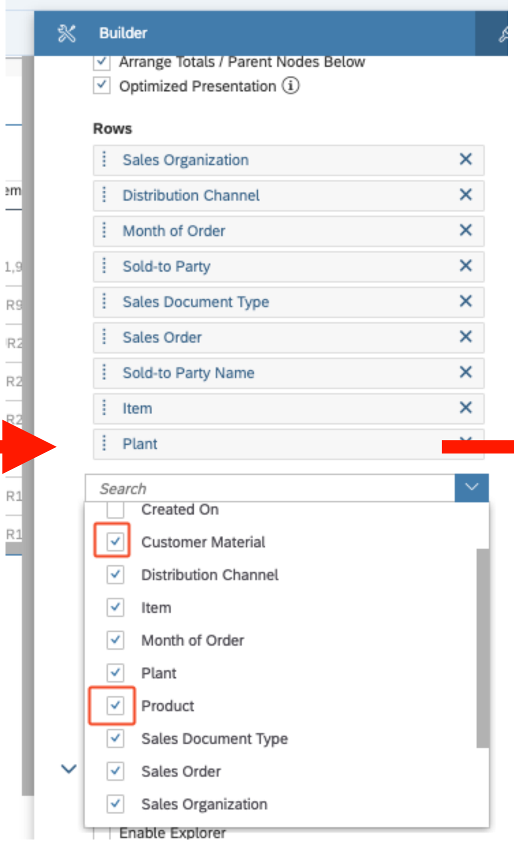
☑ Arrange Totals / Parent Nodes Below
☑ Optimized Presentation ⓘ

Rows

- Sales Organization ✕
- Distribution Channel ✕
- Month of Order ✕
- Sold-to Party ✕
- Sales Document Type ✕
- Sales Order ✕
- Sold-to Party Name ✕
- Item ✕
- Plant ✕

+ Add Dimensions

Columns



☑ Arrange Totals / Parent Nodes Below
☑ Optimized Presentation ⓘ

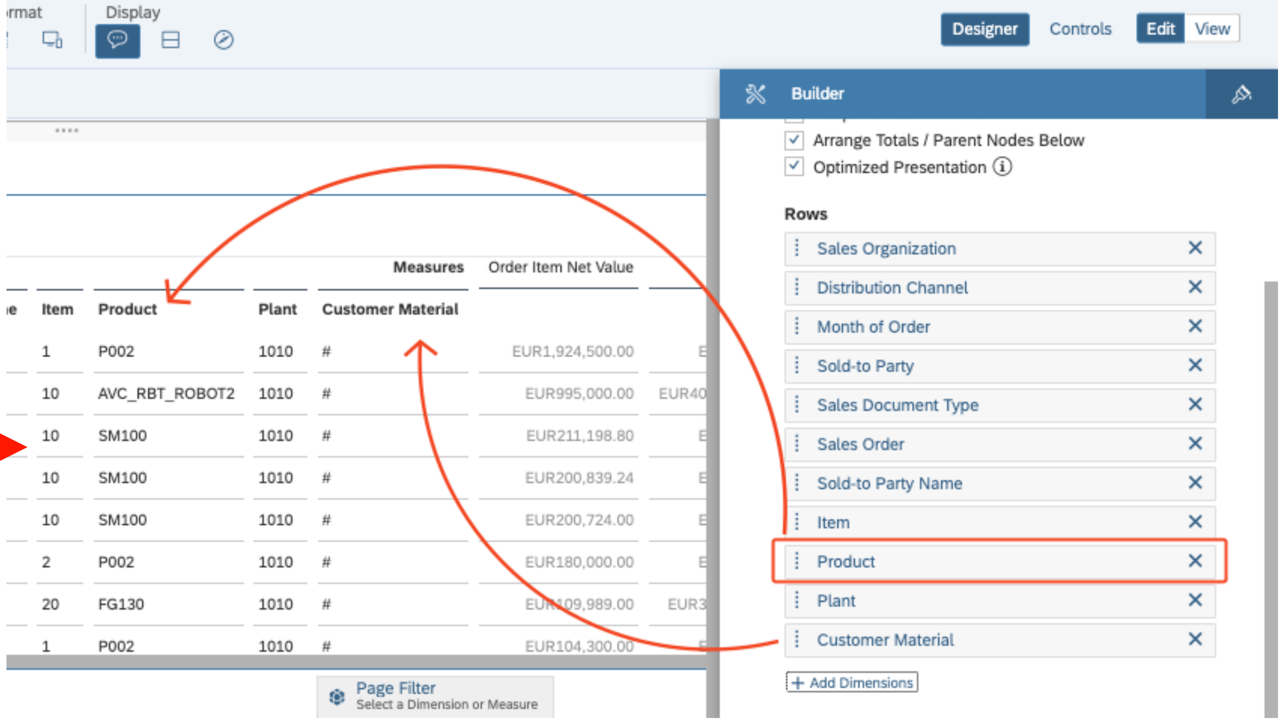
Rows

- Sales Organization ✕
- Distribution Channel ✕
- Month of Order ✕
- Sold-to Party ✕
- Sales Document Type ✕
- Sales Order ✕
- Sold-to Party Name ✕
- Item ✕
- Plant ✕

Search

□ Created On
☑ Customer Material
☑ Distribution Channel
☑ Item
☑ Month of Order
☑ Plant
☑ Product
☑ Sales Document Type
☑ Sales Order
☑ Sales Organization

Enable Explorer



			Measures	Order Item Net Value
Item	Product	Plant	Customer Material	
1	P002	1010	#	EUR1,924,500.00
10	AVC_RBT_ROBOT2	1010	#	EUR995,000.00
10	SM100	1010	#	EUR211,198.80
10	SM100	1010	#	EUR200,839.24
10	SM100	1010	#	EUR200,724.00
2	P002	1010	#	EUR180,000.00
20	FG130	1010	#	EUR109,989.00
1	P002	1010	#	EUR104,300.00

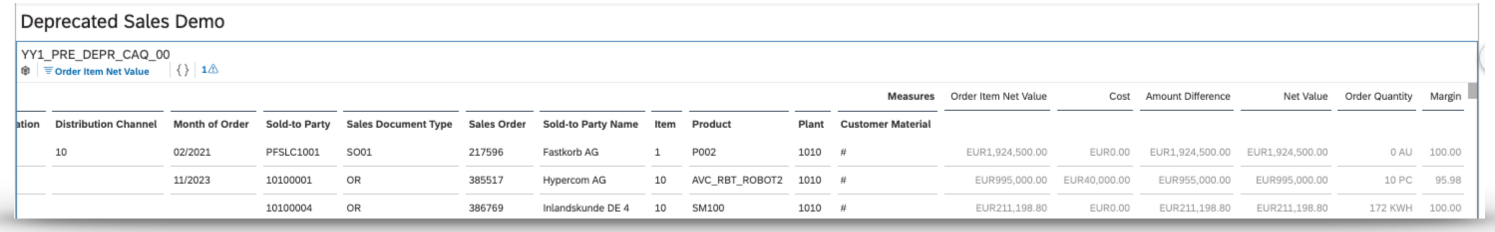
☑ Arrange Totals / Parent Nodes Below
☑ Optimized Presentation ⓘ

Rows

- Sales Organization ✕
- Distribution Channel ✕
- Month of Order ✕
- Sold-to Party ✕
- Sales Document Type ✕
- Sales Order ✕
- Sold-to Party Name ✕
- Item ✕
- Product ✕
- Plant ✕
- Customer Material ✕

+ Add Dimensions

We once again check the report to make sure that everything that needed to be changed has been changed.



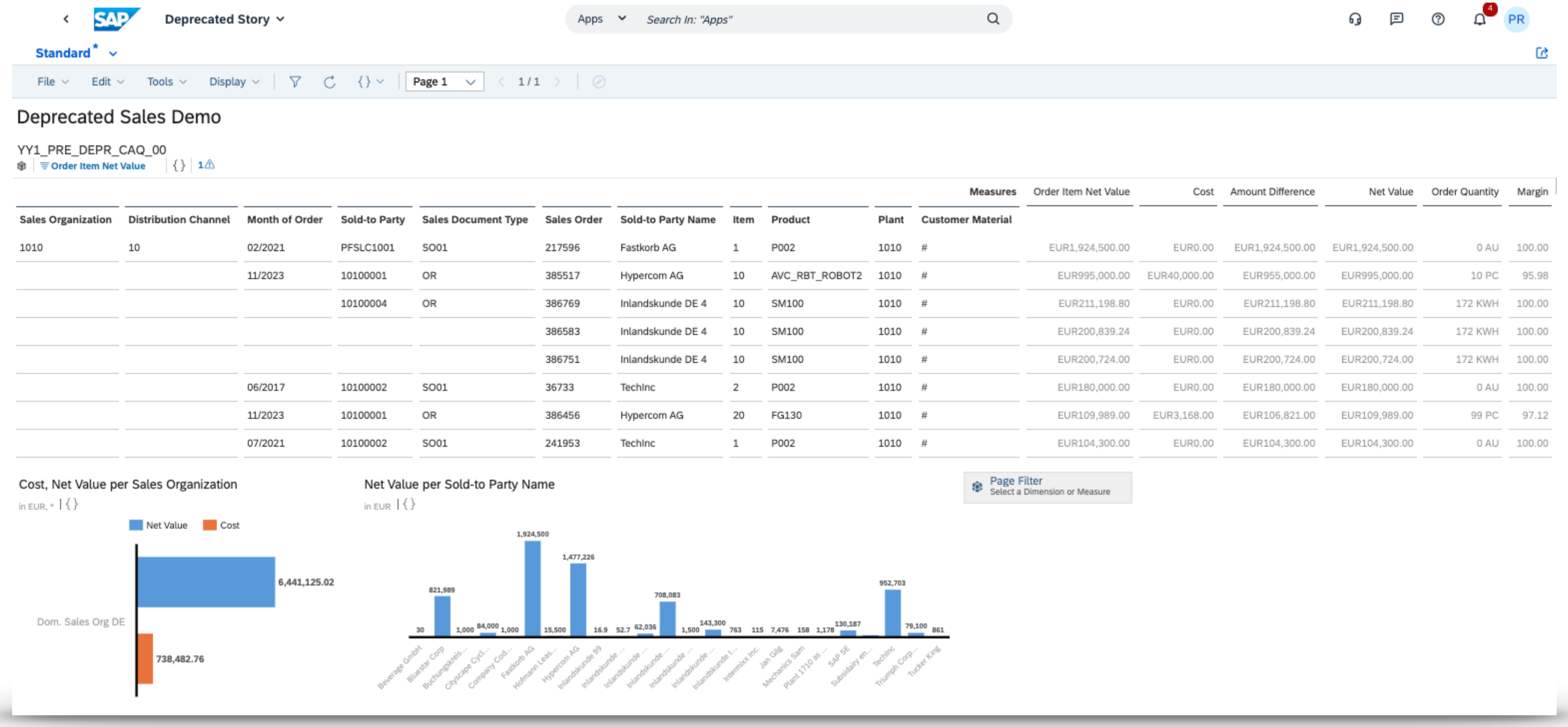
Deprecated Sales Demo

YY1_PRE_DEPR_CAQ_00

									Measures	Order Item Net Value	Cost	Amount Difference	Net Value	Order Quantity	Margin
ation	Distribution Channel	Month of Order	Sold-to Party	Sales Document Type	Sales Order	Sold-to Party Name	Item	Product	Plant	Customer Material					
	10	02/2021	PFSLC1001	SO01	217596	Fastkorb AG	1	P002	1010	#	EUR1,924,500.00	EUR0.00	EUR1,924,500.00	EUR1,924,500.00	0 AU	100.00
		11/2023	10100001	OR	385517	Hypercom AG	10	AVC_RBT_ROBOT2	1010	#	EUR995,000.00	EUR40,000.00	EUR955,000.00	EUR995,000.00	10 PC	95.98
			10100004	OR	386769	Inlandskunde DE 4	10	SM100	1010	#	EUR211,198.80	EUR0.00	EUR211,198.80	EUR211,198.80	172 KWH	100.00

Once we are happy with our changes, and checked that all the data presented is as it was before we made changes, we can activate the eSAC story. If we launch the eSAC story by using the tile on our Fiori Launchpad, our story is presented and displays as desired.

Note that in our case, we only needed to add a couple of fields. Depending on the sophistication of your eSAC story, the changes might be more extensive. Again we cannot stress enough the importance of being able to do before/after comparisons of both layout and content.



Deprecated Sales Demo

YY1_PRE_DEPR_CAQ_00

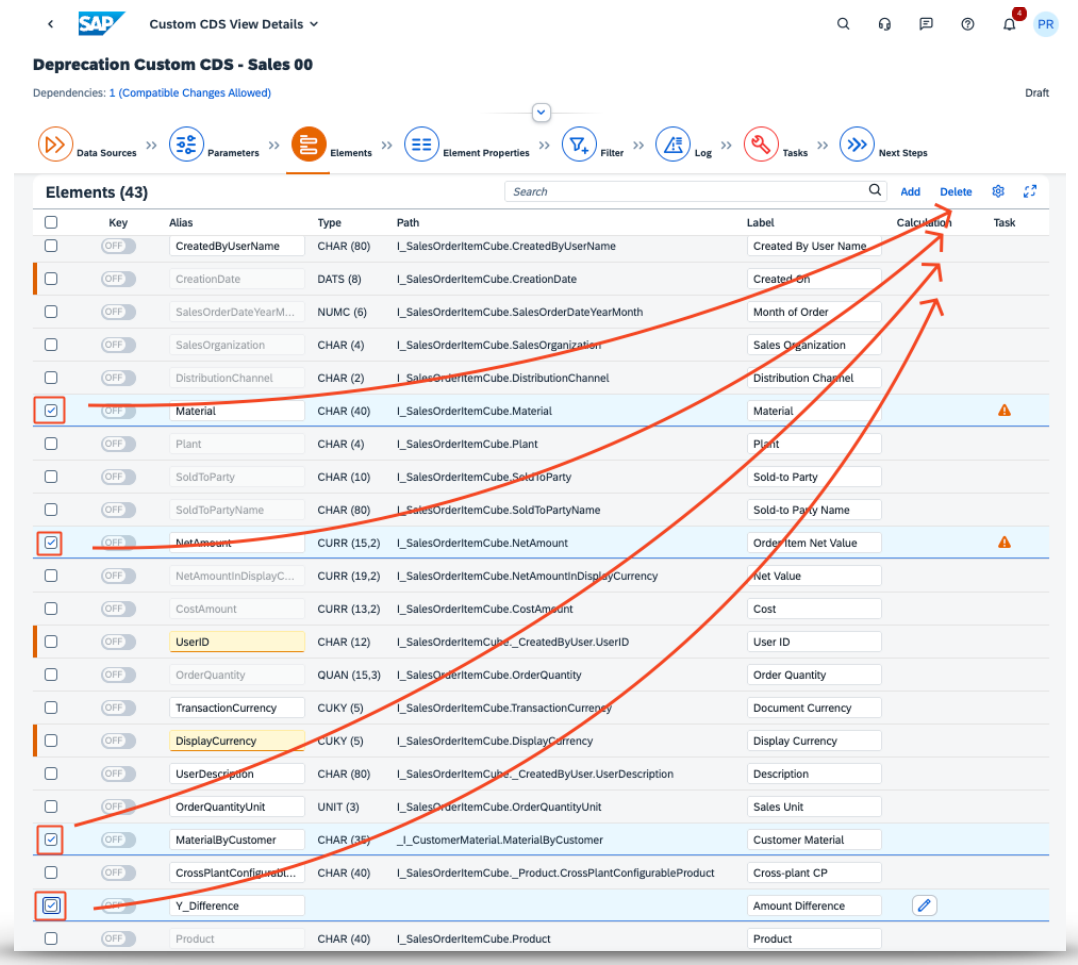
										Measures	Order Item Net Value	Cost	Amount Difference	Net Value	Order Quantity	Margin
Sales Organization	Distribution Channel	Month of Order	Sold-to Party	Sales Document Type	Sales Order	Sold-to Party Name	Item	Product	Plant	Customer Material						
1010	10	02/2021	PFSLC1001	SO01	217596	Fastkorb AG	1	P002	1010	#	EUR1,924,500.00	EUR0.00	EUR1,924,500.00	EUR1,924,500.00	0 AU	100.00
		11/2023	10100001	OR	385517	Hypercom AG	10	AVC_RBT_ROBOT2	1010	#	EUR995,000.00	EUR40,000.00	EUR955,000.00	EUR995,000.00	10 PC	95.98
			10100004	OR	386769	Inlandskunde DE 4	10	SM100	1010	#	EUR211,198.80	EUR0.00	EUR211,198.80	EUR211,198.80	172 KWH	100.00
					386583	Inlandskunde DE 4	10	SM100	1010	#	EUR200,839.24	EUR0.00	EUR200,839.24	EUR200,839.24	172 KWH	100.00
					386751	Inlandskunde DE 4	10	SM100	1010	#	EUR200,724.00	EUR0.00	EUR200,724.00	EUR200,724.00	172 KWH	100.00
		06/2017	10100002	SO01	36733	TechInc	2	P002	1010	#	EUR180,000.00	EUR0.00	EUR180,000.00	EUR180,000.00	0 AU	100.00
		11/2023	10100001	OR	386456	Hypercom AG	20	FG130	1010	#	EUR109,989.00	EUR3,168.00	EUR106,821.00	EUR109,989.00	99 PC	97.12
		07/2021	10100002	SO01	241953	TechInc	1	P002	1010	#	EUR104,300.00	EUR0.00	EUR104,300.00	EUR104,300.00	0 AU	100.00

Cost, Net Value per Sales Organization

Net Value per Sold-to Party Name

Step 6 - Amending the custom CDS

Now that we have propagated all the required changes, we are back where everything started. We open our custom CDS with the Custom CDS app, switch to edit mode and go to the Elements tab, where we select and delete all the deprecated fields and fields we want to remove.



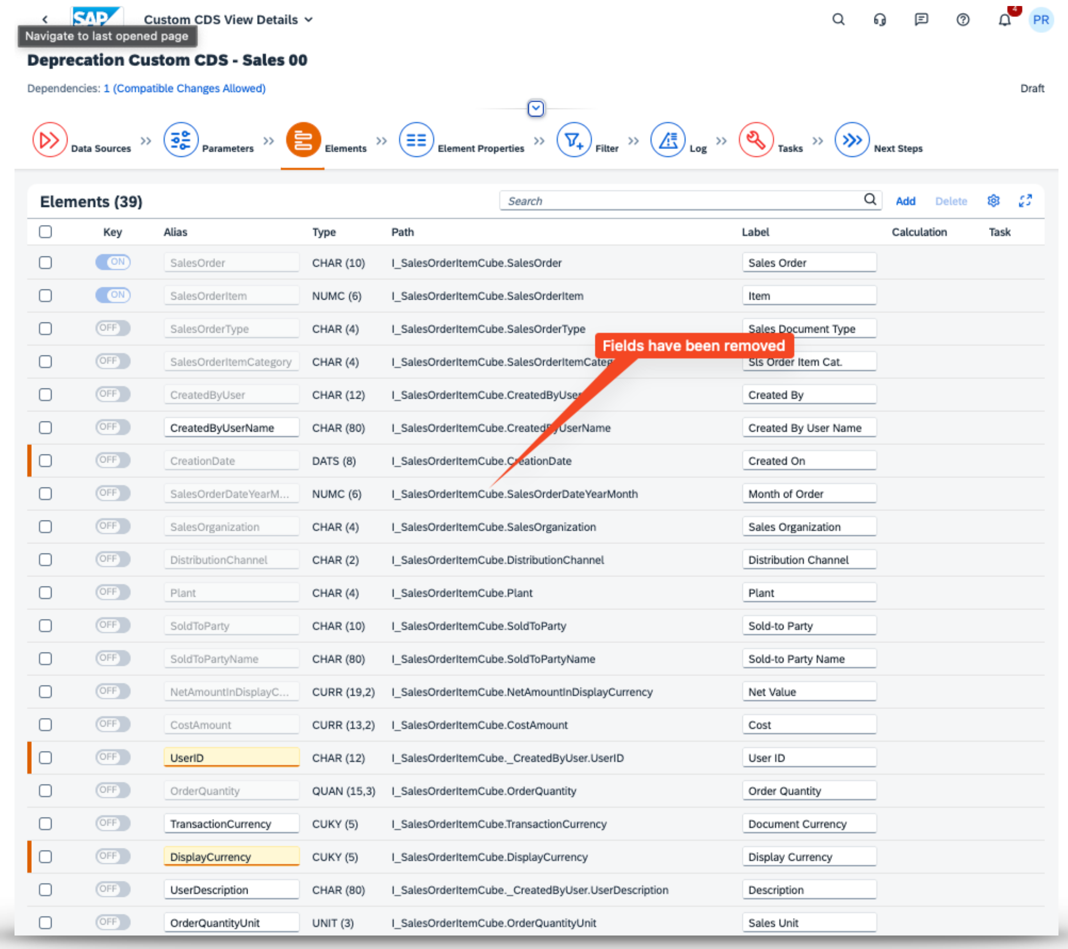
Deprecation Custom CDS - Sales 00

Dependencies: 1 (Compatible Changes Allowed)

Draft

Elements (43)

□	Key	Alias	Type	Path	Label	Calculation	Task
□	OFF	CreatedByUserName	CHAR (80)	I_SalesOrderItemCube.CreatedByUserName	Created By User Name		
□	OFF	CreationDate	DATS (8)	I_SalesOrderItemCube.CreationDate	Created On		
□	OFF	SalesOrderDateYearM...	NUMC (6)	I_SalesOrderItemCube.SalesOrderDateYearMonth	Month of Order		
□	OFF	SalesOrganization	CHAR (4)	I_SalesOrderItemCube.SalesOrganization	Sales Organization		
□	OFF	DistributionChannel	CHAR (2)	I_SalesOrderItemCube.DistributionChannel	Distribution Channel		
☑	OFF	Material	CHAR (40)	I_SalesOrderItemCube.Material	Material		⚠
□	OFF	Plant	CHAR (4)	I_SalesOrderItemCube.Plant	Plant		
□	OFF	SoldToParty	CHAR (10)	I_SalesOrderItemCube.SoldToParty	Sold-to Party		
□	OFF	SoldToPartyName	CHAR (80)	I_SalesOrderItemCube.SoldToPartyName	Sold-to Party Name		
☑	OFF	NetAmount	CURR (15,2)	I_SalesOrderItemCube.NetAmount	Order Item Net Value		⚠
□	OFF	NetAmountInDisplayC...	CURR (19,2)	I_SalesOrderItemCube.NetAmountInDisplayCurrency	Net Value		
□	OFF	CostAmount	CURR (13,2)	I_SalesOrderItemCube.CostAmount	Cost		
□	OFF	UserID	CHAR (12)	I_SalesOrderItemCube._CreatedByUser.UserID	User ID		
□	OFF	OrderQuantity	QUAN (15,3)	I_SalesOrderItemCube.OrderQuantity	Order Quantity		
□	OFF	TransactionCurrency	CUKY (5)	I_SalesOrderItemCube.TransactionCurrency	Document Currency		
□	OFF	DisplayCurrency	CUKY (5)	I_SalesOrderItemCube.DisplayCurrency	Display Currency		
□	OFF	UserDescription	CHAR (80)	I_SalesOrderItemCube._CreatedByUser.UserDescription	Description		
□	OFF	OrderQuantityUnit	UNIT (3)	I_SalesOrderItemCube.OrderQuantityUnit	Sales Unit		
☑	OFF	MaterialByCustomer	CHAR (35)	_I_CustomerMaterial.MaterialByCustomer	Customer Material		
□	OFF	CrossPlantConfigurabl...	CHAR (40)	I_SalesOrderItemCube._Product.CrossPlantConfigurableProduct	Cross-plant CP		
☑	OFF	Y_Difference			Amount Difference	✎	
□	OFF	Product	CHAR (40)	I_SalesOrderItemCube.Product	Product		



Deprecation Custom CDS - Sales 00

Dependencies: 1 (Compatible Changes Allowed)

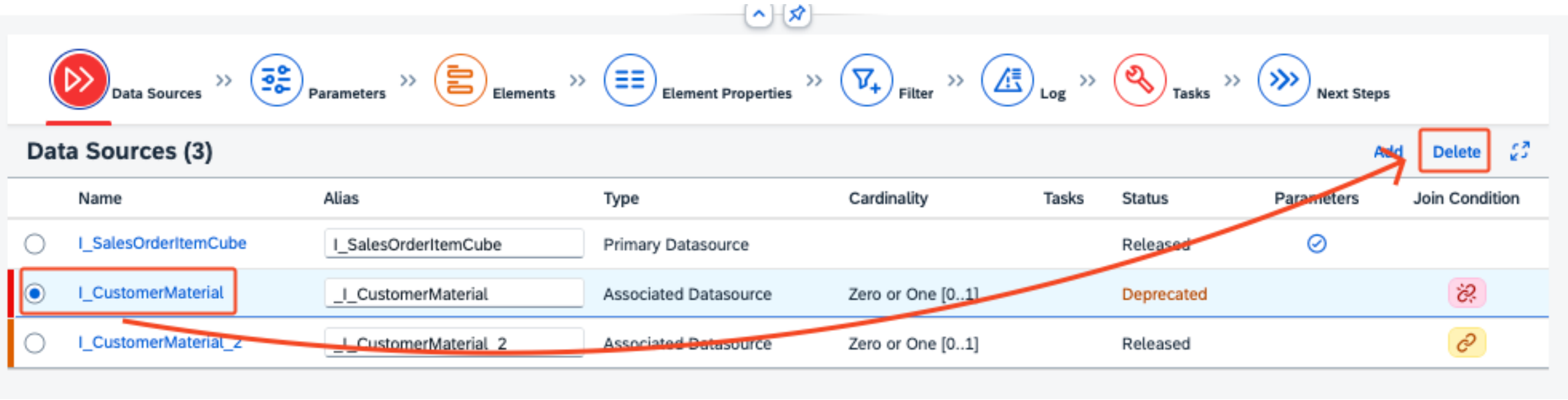
Draft

Elements (39)

Fields have been removed

□	Key	Alias	Type	Path	Label	Calculation	Task
□	ON	SalesOrder	CHAR (10)	I_SalesOrderItemCube.SalesOrder	Sales Order		
□	ON	SalesOrderItem	NUMC (6)	I_SalesOrderItemCube.SalesOrderItem	Item		
□	OFF	SalesOrderType	CHAR (4)	I_SalesOrderItemCube.SalesOrderType	Sales Document Type		
□	OFF	SalesOrderItemCategory	CHAR (4)	I_SalesOrderItemCube.SalesOrderItemCateg	Sls Order Item Cat.		
□	OFF	CreatedByUser	CHAR (12)	I_SalesOrderItemCube.CreatedByUser	Created By		
□	OFF	CreatedByUserName	CHAR (80)	I_SalesOrderItemCube.CreatedByUserName	Created By User Name		
□	OFF	CreationDate	DATS (8)	I_SalesOrderItemCube.CreationDate	Created On		
□	OFF	SalesOrderDateYearM...	NUMC (6)	I_SalesOrderItemCube.SalesOrderDateYearMonth	Month of Order		
□	OFF	SalesOrganization	CHAR (4)	I_SalesOrderItemCube.SalesOrganization	Sales Organization		
□	OFF	DistributionChannel	CHAR (2)	I_SalesOrderItemCube.DistributionChannel	Distribution Channel		
□	OFF	Plant	CHAR (4)	I_SalesOrderItemCube.Plant	Plant		
□	OFF	SoldToParty	CHAR (10)	I_SalesOrderItemCube.SoldToParty	Sold-to Party		
□	OFF	SoldToPartyName	CHAR (80)	I_SalesOrderItemCube.SoldToPartyName	Sold-to Party Name		
□	OFF	NetAmountInDisplayC...	CURR (19,2)	I_SalesOrderItemCube.NetAmountInDisplayCurrency	Net Value		
□	OFF	CostAmount	CURR (13,2)	I_SalesOrderItemCube.CostAmount	Cost		
□	OFF	UserID	CHAR (12)	I_SalesOrderItemCube._CreatedByUser.UserID	User ID		
□	OFF	OrderQuantity	QUAN (15,3)	I_SalesOrderItemCube.OrderQuantity	Order Quantity		
□	OFF	TransactionCurrency	CUKY (5)	I_SalesOrderItemCube.TransactionCurrency	Document Currency		
□	OFF	DisplayCurrency	CUKY (5)	I_SalesOrderItemCube.DisplayCurrency	Display Currency		
□	OFF	UserDescription	CHAR (80)	I_SalesOrderItemCube._CreatedByUser.UserDescription	Description		
□	OFF	OrderQuantityUnit	UNIT (3)	I_SalesOrderItemCube.OrderQuantityUnit	Sales Unit		

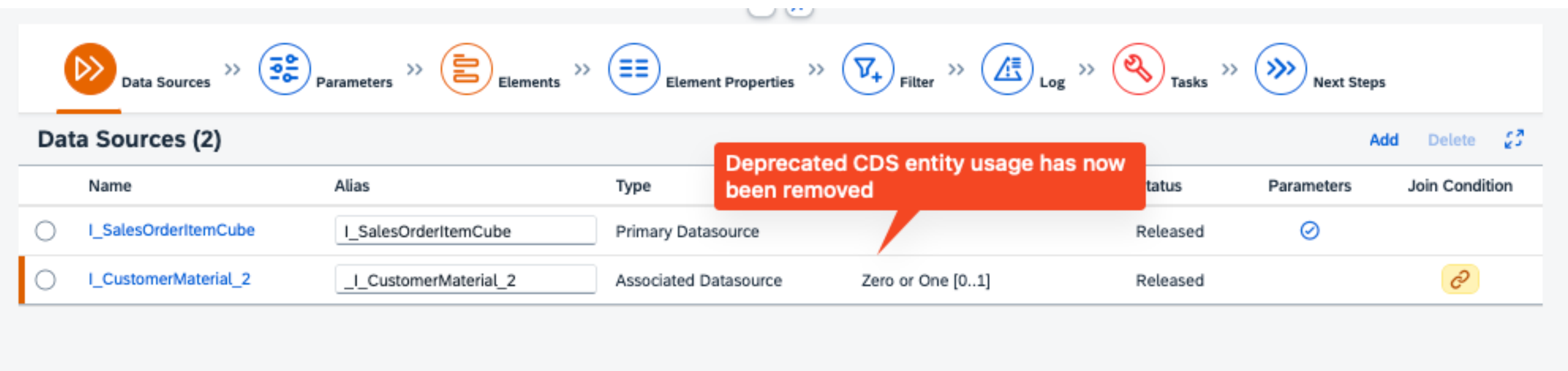
Now that the `Customer Material` field that was provided by the Deprecated CDS Entity has been removed, we can now go to the Data Sources tab and remove the association to the Deprecated CDS entity.



Data Sources (3)

	Name	Alias	Type	Cardinality	Tasks	Status	Parameters	Join Condition
○	I_SalesOrderItemCube	I_SalesOrderItemCube	Primary Datasource			Released	✓	
●	I_CustomerMaterial	_I_CustomerMaterial	Associated Datasource	Zero or One [0..1]		Deprecated		🔗
○	I_CustomerMaterial_2	_I_CustomerMaterial_2	Associated Datasource	Zero or One [0..1]		Released		🔗

The deprecated CDS entity has now been removed.

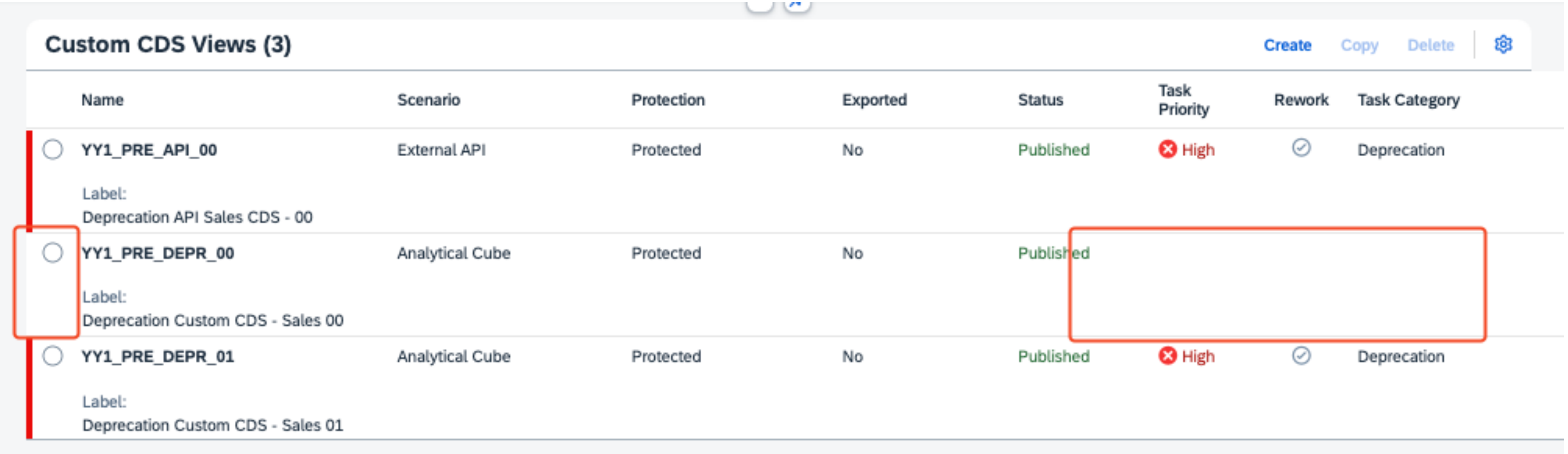


Data Sources (2)

Deprecated CDS entity usage has now been removed

	Name	Alias	Type	Cardinality	Status	Parameters	Join Condition
○	I_SalesOrderItemCube	I_SalesOrderItemCube	Primary Datasource		Released	✓	
○	I_CustomerMaterial_2	_I_CustomerMaterial_2	Associated Datasource	Zero or One [0..1]	Released		🔗

We can perform an integrity check by clicking the Check button and if the check is successful, we can then publish our custom CDS by clicking the Publish button. One done, when we go back the Custom CDS view list screen, we see that there are no outstanding rework tasks and our custom CDS is no longer flagged as being with Deprecation! We are done. Or are we?

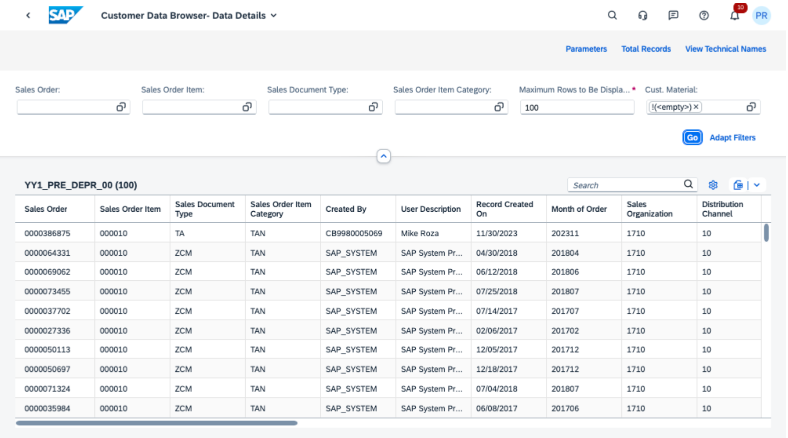


Custom CDS Views (3)

	Name	Scenario	Protection	Exported	Status	Task Priority	Rework	Task Category
○	YY1_PRE_API_00 Label: Deprecation API Sales CDS - 00	External API	Protected	No	Published	✖ High	✓	Deprecation
○	YY1_PRE_DEPR_00 Label: Deprecation Custom CDS - Sales 00	Analytical Cube	Protected	No	Published			
○	YY1_PRE_DEPR_01 Label: Deprecation Custom CDS - Sales 01	Analytical Cube	Protected	No	Published	✖ High	✓	Deprecation

Step 7 - Better safe than sorry

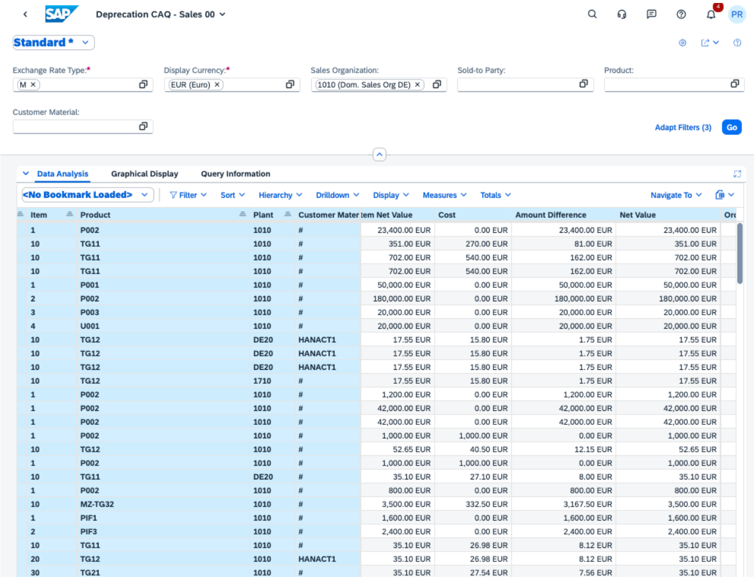
We have step by step tested our changes, so we could call it a day. However, in the spirit of being better safe than sorry, I would recommend doing a final pass, by once again launching the customer data browser, the Query report and eSAC story, to make sure that nothing was missed. If not, you are then ready to move your changes in the landscape until it gets to production.



Sales Order:
Sales Order Item:
Sales Document Type:
Sales Order Item Category:
Maximum Rows to Be Displa...*: 100
Cust. Material: !(<empty>)

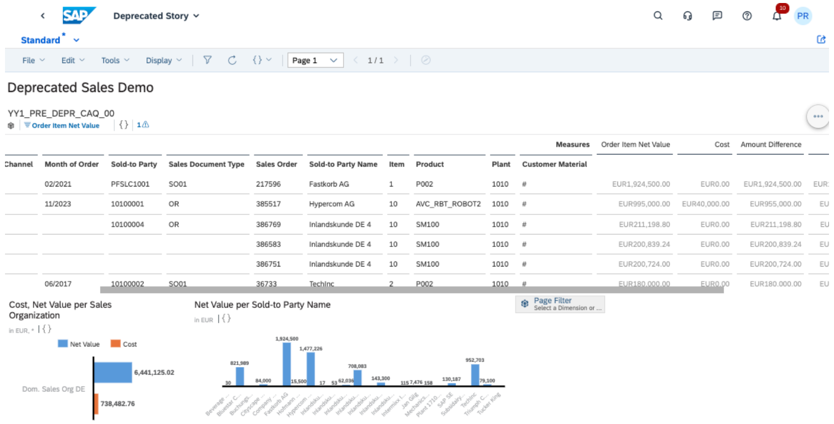
YY1_PRE_DEPR_00 (100)

Sales Order	Sales Order Item	Sales Document Type	Sales Order Item Category	Created By	User Description	Record Created On	Month of Order	Sales Organization	Distribution Channel
0000386875	000010	TA	TAN	CB9980005069	Mike Roza	11/30/2023	202311	1710	10
0000064331	000010	ZCM	TAN	SAP_SYSTEM	SAP System Pr...	04/30/2018	201804	1710	10
0000069062	000010	ZCM	TAN	SAP_SYSTEM	SAP System Pr...	06/12/2018	201806	1710	10
0000073455	000010	ZCM	TAN	SAP_SYSTEM	SAP System Pr...	07/25/2018	201807	1710	10
0000037702	000010	ZCM	TAN	SAP_SYSTEM	SAP System Pr...	07/14/2017	201707	1710	10
0000027336	000010	ZCM	TAN	SAP_SYSTEM	SAP System Pr...	02/06/2017	201702	1710	10
0000050113	000010	ZCM	TAN	SAP_SYSTEM	SAP System Pr...	12/05/2017	201712	1710	10
0000050697	000010	ZCM	TAN	SAP_SYSTEM	SAP System Pr...	12/18/2017	201712	1710	10
0000071324	000010	ZCM	TAN	SAP_SYSTEM	SAP System Pr...	07/04/2018	201807	1710	10
0000035984	000010	ZCM	TAN	SAP_SYSTEM	SAP System Pr...	06/08/2017	201706	1710	10



Exchange Rate Type:* M
Display Currency:* EUR (Euro)
Sales Organization: 1010 (Dom. Sales Org DE)
Sold-to Party:
Product:
Customer Material:

Item	Product	Plant	Customer Mater	tem Net Value	Cost	Amount Difference	Net Value	Or
1	P002	1010	#	23,400.00 EUR	0.00 EUR	23,400.00 EUR	23,400.00 EUR	
10	TG11	1010	#	351.00 EUR	270.00 EUR	81.00 EUR	351.00 EUR	
10	TG11	1010	#	702.00 EUR	540.00 EUR	162.00 EUR	702.00 EUR	
10	TG11	1010	#	702.00 EUR	540.00 EUR	162.00 EUR	702.00 EUR	
1	P001	1010	#	50,000.00 EUR	0.00 EUR	50,000.00 EUR	50,000.00 EUR	
2	P002	1010	#	180,000.00 EUR	0.00 EUR	180,000.00 EUR	180,000.00 EUR	
3	P003	1010	#	20,000.00 EUR	0.00 EUR	20,000.00 EUR	20,000.00 EUR	
4	U001	1010	#	20,000.00 EUR	0.00 EUR	20,000.00 EUR	20,000.00 EUR	
10	TG12	DE20	HANACT1	17.55 EUR	15.80 EUR	1.75 EUR	17.55 EUR	
10	TG12	DE20	HANACT1	17.55 EUR	15.80 EUR	1.75 EUR	17.55 EUR	
10	TG12	DE20	HANACT1	17.55 EUR	15.80 EUR	1.75 EUR	17.55 EUR	
10	TG12	1710	#	17.55 EUR	15.80 EUR	1.75 EUR	17.55 EUR	
1	P002	1010	#	1,200.00 EUR	0.00 EUR	1,200.00 EUR	1,200.00 EUR	
1	P002	1010	#	42,000.00 EUR	0.00 EUR	42,000.00 EUR	42,000.00 EUR	
1	P002	1010	#	42,000.00 EUR	0.00 EUR	42,000.00 EUR	42,000.00 EUR	
1	P002	1010	#	1,000.00 EUR	1,000.00 EUR	0.00 EUR	1,000.00 EUR	
10	TG12	1010	#	52.65 EUR	40.50 EUR	12.15 EUR	52.65 EUR	
1	P002	1010	#	1,000.00 EUR	1,000.00 EUR	0.00 EUR	1,000.00 EUR	
10	TG11	DE20	#	35.10 EUR	27.10 EUR	8.00 EUR	35.10 EUR	
1	P002	1010	#	800.00 EUR	0.00 EUR	800.00 EUR	800.00 EUR	
10	MZ-TG32	1010	#	3,500.00 EUR	332.50 EUR	3,167.50 EUR	3,500.00 EUR	
1	PIF1	1010	#	1,600.00 EUR	0.00 EUR	1,600.00 EUR	1,600.00 EUR	
2	PIF3	1010	#	2,400.00 EUR	0.00 EUR	2,400.00 EUR	2,400.00 EUR	
10	TG11	1010	#	35.10 EUR	26.98 EUR	8.12 EUR	35.10 EUR	
20	TG12	1010	HANACT1	35.10 EUR	26.98 EUR	8.12 EUR	35.10 EUR	
30	TG21	1010	#	35.10 EUR	27.54 EUR	7.56 EUR	35.10 EUR	



Deprecated Sales Demo

YY1_PRE_DEPR_CAQ_00

									Measures	Order Item Net Value	Cost	Amount Difference	
Channel	Month of Order	Sold-to Party	Sales Document Type	Sales Order	Sold-to Party Name	Item	Product	Plant	Customer Material				
	02/2021	PFSLC1001	SO01	217596	Fastkorb AG	1	P002	1010	#	EUR1,924,500.00	EUR0.00	EUR1,924,500.00	EUR
	11/2023	10100001	OR	385517	Hypercom AG	10	AVC_RBT_ROBOT2	1010	#	EUR995,000.00	EUR40,000.00	EUR955,000.00	EU
		10100004	OR	386769	Inlandskunde DE 4	10	SM100	1010	#	EUR211,198.80	EUR0.00	EUR211,198.80	EU
				386583	Inlandskunde DE 4	10	SM100	1010	#	EUR200,839.24	EUR0.00	EUR200,839.24	EU
				386751	Inlandskunde DE 4	10	SM100	1010	#	EUR200,724.00	EUR0.00	EUR200,724.00	EU
	06/2017	10100002	SO01	36733	TechInc	2	P002	1010	#	EUR180,000.00	EUR0.00	EUR180,000.00	EU

Cost, Net Value per Sales Organization
in EUR, *

Net Value per Sold-to Party Name
in EUR

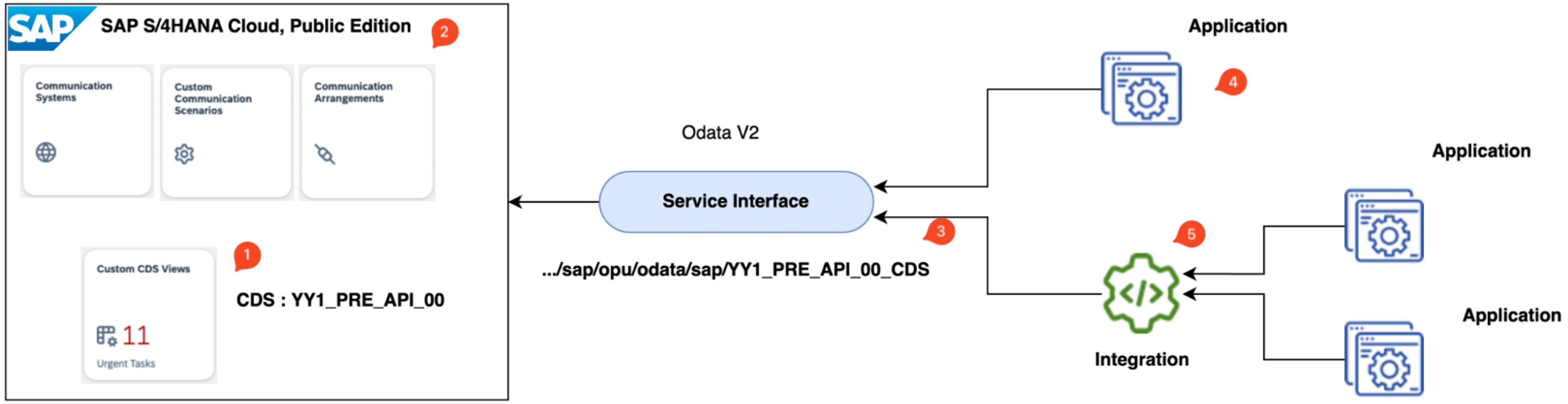
Introduction to the use case 2 - External API

Setting the scene

To work through this deprecation process, we have devised the following hypothetical storyline:

In our demo organisation, we have a landscape that requires us to make available on-demand some basic sales information to sister companies, for the purpose of consolidating sales information and forecasting. Some of these applications make a direct call to the SAP S/4HANA Cloud service, some leverage a middleware/integration layer in between. In order to provide this information, we created a custom CDS and then exposed it as an Odata v2 service. A high level diagram of this setup is shown below.

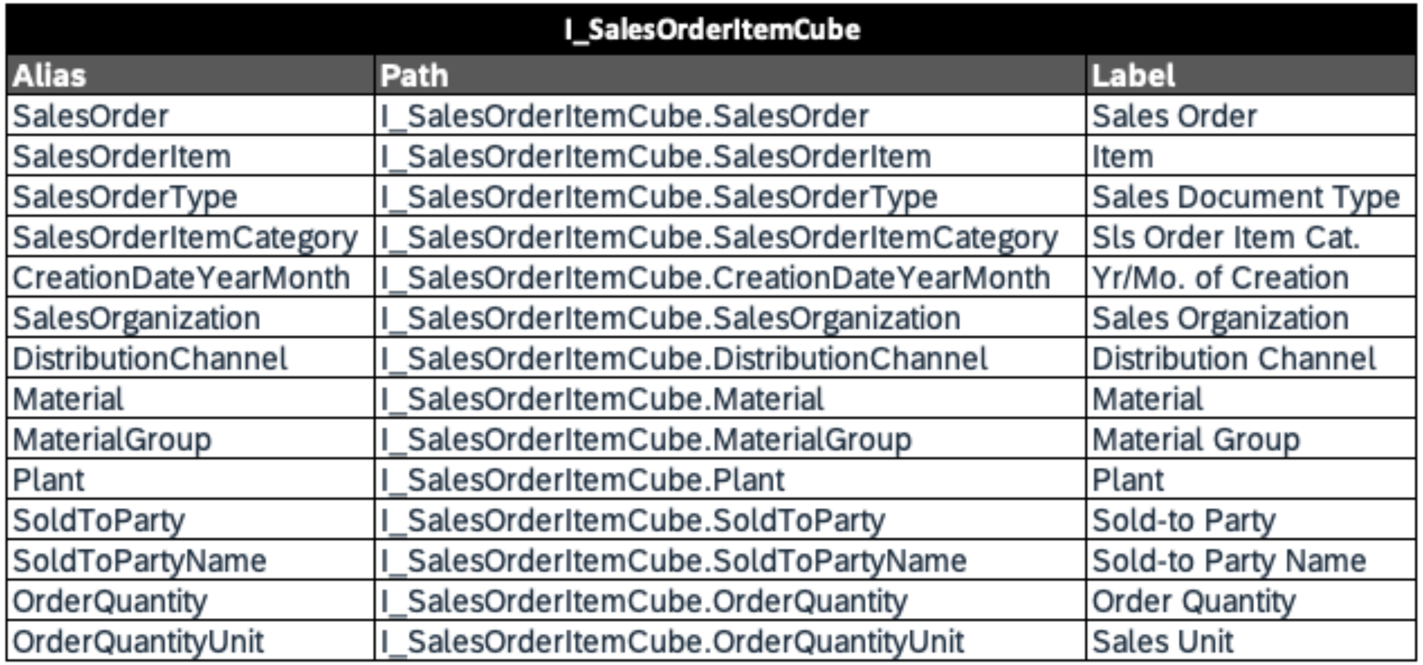
1. We created a custom CDS
2. Using the usual apps available to expose the CDS as a Odata service
3. That creates an URL entry point into our S/4HANA Cloud system
4. That is used by an application directly
5. Or via an integration layer (eg:BTP)



At the time of the requirement, based on the intended end-use of this service (on-demand querying of sales data) a custom CDS, with the scenario External API was created. All the data required was provided by a single CDS:

- **I_SalesOrderItemCube** - Sales Order Item - Cube, which provided us with sales order item data (dates, product, quantities, etc..)

The table below shows which fields were selected as Elements to be exposed via this CDS.



I_SalesOrderItemCube

Alias	Path	Label
SalesOrder	I_SalesOrderItemCube.SalesOrder	Sales Order
SalesOrderItem	I_SalesOrderItemCube.SalesOrderItem	Item
SalesOrderType	I_SalesOrderItemCube.SalesOrderType	Sales Document Type
SalesOrderItemCategory	I_SalesOrderItemCube.SalesOrderItemCategory	Sls Order Item Cat.
CreationDateYearMonth	I_SalesOrderItemCube.CreationDateYearMonth	Yr/Mo. of Creation
SalesOrganization	I_SalesOrderItemCube.SalesOrganization	Sales Organization
DistributionChannel	I_SalesOrderItemCube.DistributionChannel	Distribution Channel
Material	I_SalesOrderItemCube.Material	Material
MaterialGroup	I_SalesOrderItemCube.MaterialGroup	Material Group
Plant	I_SalesOrderItemCube.Plant	Plant
SoldToParty	I_SalesOrderItemCube.SoldToParty	Sold-to Party
SoldToPartyName	I_SalesOrderItemCube.SoldToPartyName	Sold-to Party Name
OrderQuantity	I_SalesOrderItemCube.OrderQuantity	Order Quantity
OrderQuantityUnit	I_SalesOrderItemCube.OrderQuantityUnit	Sales Unit

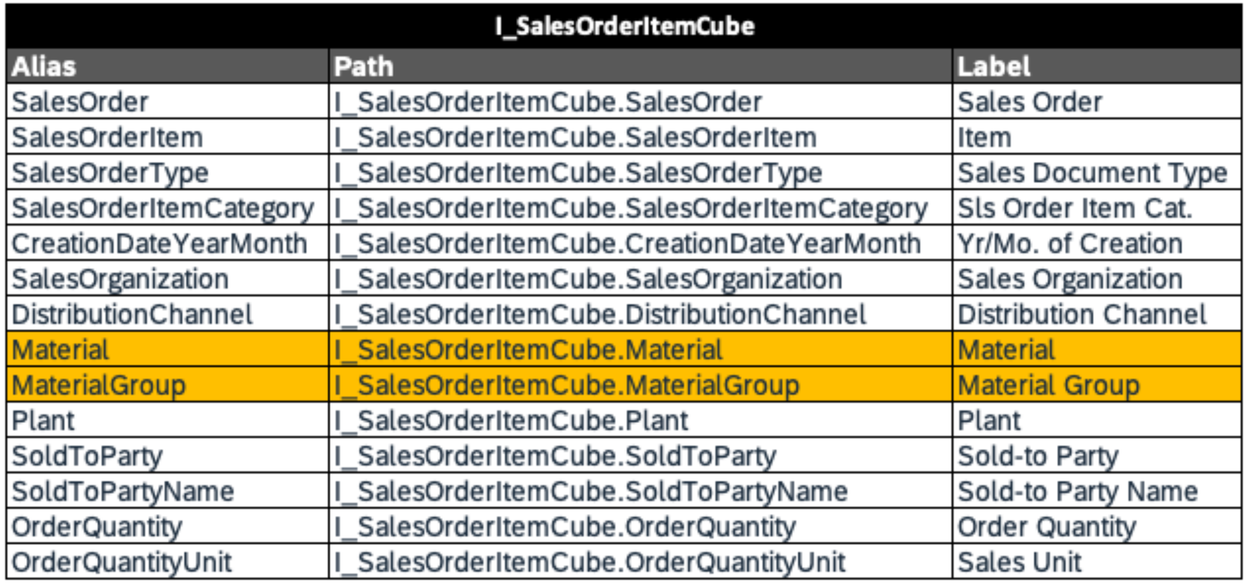
Processing the CDS Deprecation

The deprecation announcement

Having in the previous chapter set the scene for our scenario, we now fast forward to a hypothetical upgrade of SAP S/4HANA Cloud, public edition and we have taken the time to take stock of the various announcements that go with such an event, and in particular the advertised deprecations. Being responsible for 'Data & Integration' we have in particular looked at the deprecations of CDS entities and CDS fields. We have done our initial due diligence:

- We have looked at the What's New viewer and filtered the data to look at deprecations of CDSs only,
- We have an understanding of the Deprecation Policy of CDSs, and we know that the Deprecated objects will still reside in our system for at least the next 12 months - this gives us time to plan and execute this deprecation, fully understanding which are the connected systems that call our custom API.
- Whilst not a mission critical API, we know that this custom API is, for the system that makes the most frequent use of it, called every Sunday night (so we can plan for rolling out the changes)

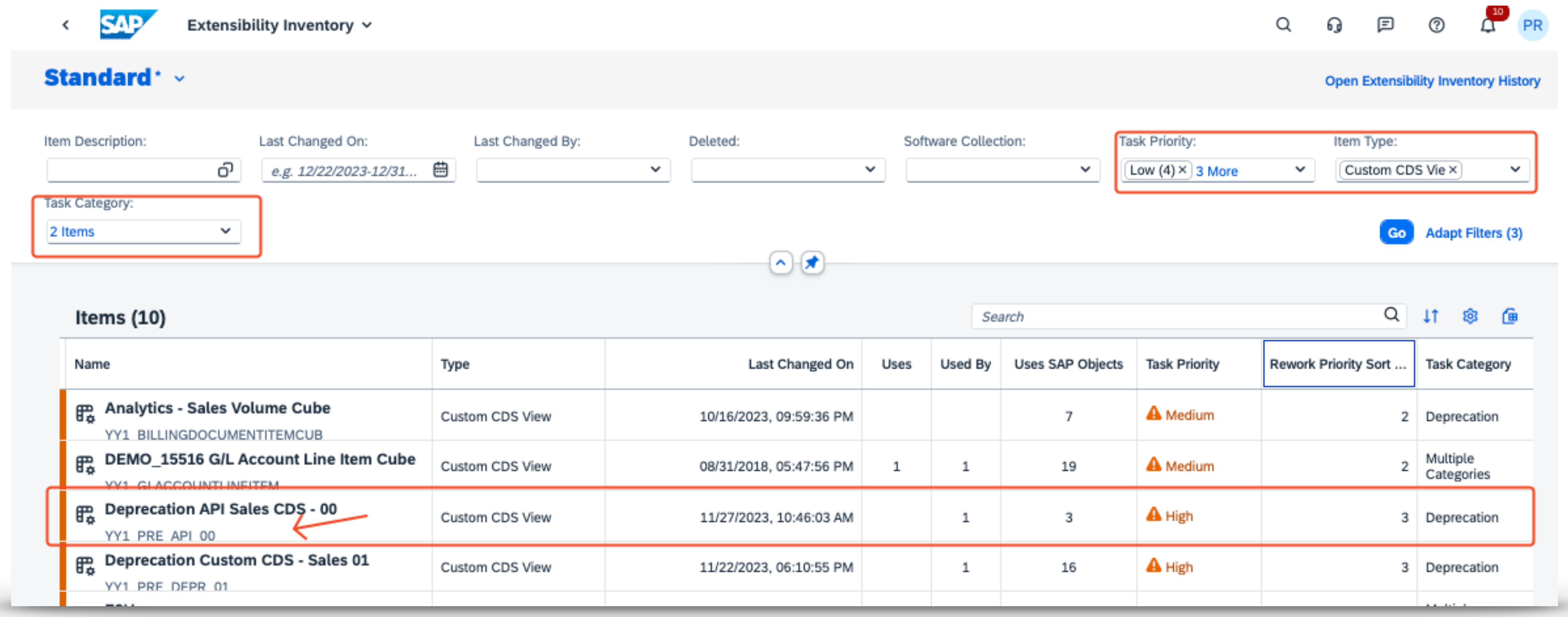
The diagram on the right, for the sake of setting the scene, shows how the deprecation announcements affect our Custom CDS. We have two deprecated fields that we need to replace with their Successors.



I_SalesOrderItemCube		
Alias	**Path**	**Label**
SalesOrder	I_SalesOrderItemCube.SalesOrder	Sales Order
SalesOrderItem	I_SalesOrderItemCube.SalesOrderItem	Item
SalesOrderType	I_SalesOrderItemCube.SalesOrderType	Sales Document Type
SalesOrderItemCategory	I_SalesOrderItemCube.SalesOrderItemCategory	Sls Order Item Cat.
CreationDateYearMonth	I_SalesOrderItemCube.CreationDateYearMonth	Yr/Mo. of Creation
SalesOrganization	I_SalesOrderItemCube.SalesOrganization	Sales Organization
DistributionChannel	I_SalesOrderItemCube.DistributionChannel	Distribution Channel
Material	I_SalesOrderItemCube.Material	Material
MaterialGroup	I_SalesOrderItemCube.MaterialGroup	Material Group
Plant	I_SalesOrderItemCube.Plant	Plant
SoldToParty	I_SalesOrderItemCube.SoldToParty	Sold-to Party
SoldToPartyName	I_SalesOrderItemCube.SoldToPartyName	Sold-to Party Name
OrderQuantity	I_SalesOrderItemCube.OrderQuantity	Order Quantity
OrderQuantityUnit	I_SalesOrderItemCube.OrderQuantityUnit	Sales Unit

Understanding the size of the rework

In the previous use case, we started this task by looking at the Custom CDS app. We could do so again here, but for the sake of variety, we will start by opening up the Extensibility Inventory App. We apply the filters to limit the scope to custom CDS deprecations.



Item Description:

Last Changed On: e.g. 12/22/2023-12/31...

Last Changed By:

Deleted:

Software Collection:

Task Priority: Low (4) 3 More

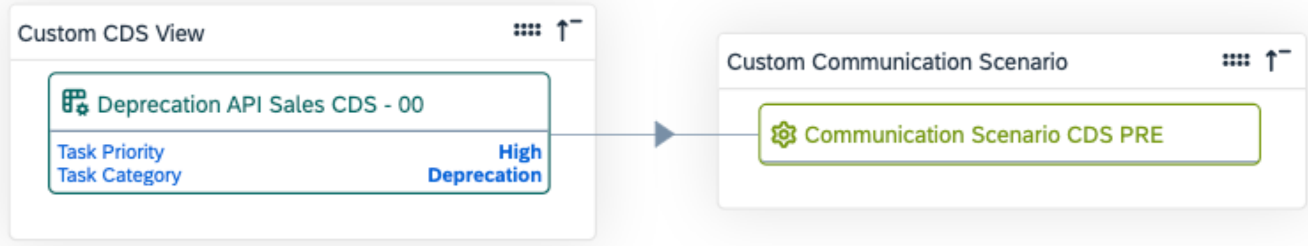
Item Type: Custom CDS Vie

Task Category: 2 Items

Items (10)

Name	Type	Last Changed On	Uses	Used By	Uses SAP Objects	Task Priority	Rework Priority Sort ...	Task Category
Analytics - Sales Volume Cube YY1 BILLINGDOCUMENTITEMCUB	Custom CDS View	10/16/2023, 09:59:36 PM			7	⚠ Medium	2	Deprecation
DEMO_15516 G/L Account Line Item Cube YY1 GLACCOUNTLINEITEM	Custom CDS View	08/31/2018, 05:47:56 PM	1	1	19	⚠ Medium	2	Multiple Categories
Deprecation API Sales CDS - 00 YY1 PRE API 00	Custom CDS View	11/27/2023, 10:46:03 AM		1	3	⚠ High	3	Deprecation
Deprecation Custom CDS - Sales 01 YY1 PRE DEPR 01	Custom CDS View	11/22/2023, 06:10:55 PM		1	16	⚠ High	3	Deprecation

We can click on the line corresponding to our CDS, as highlighted in the previous picture. This will then open up the inventory view of our CDS, and already here, we see that our CDS is used in a Custom Communication Scenario.



Custom CDS View

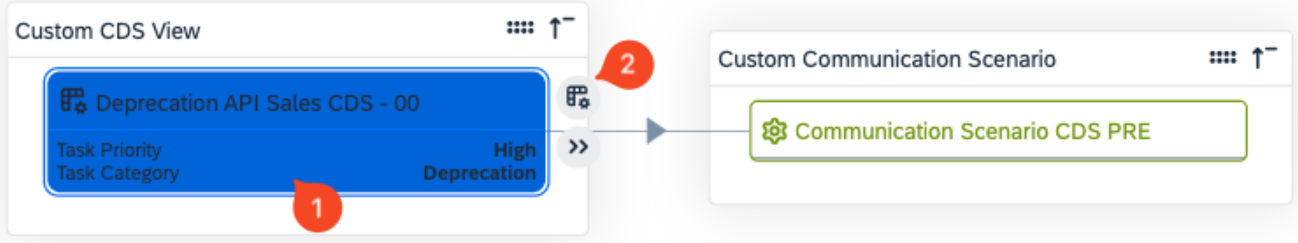
Deprecation API Sales CDS - 00

Task Priority: High
Task Category: Deprecation

Custom Communication Scenario

Communication Scenario CDS PRE

If we then click on the bound box containing the name of the custom CDS, the box will change colour (1) and reveal a couple of icons. One of which (2) will allow us to navigate to the custom CDS app. Let's click on it to go to the Custom CDS app.



Custom CDS View

Deprecation API Sales CDS - 00

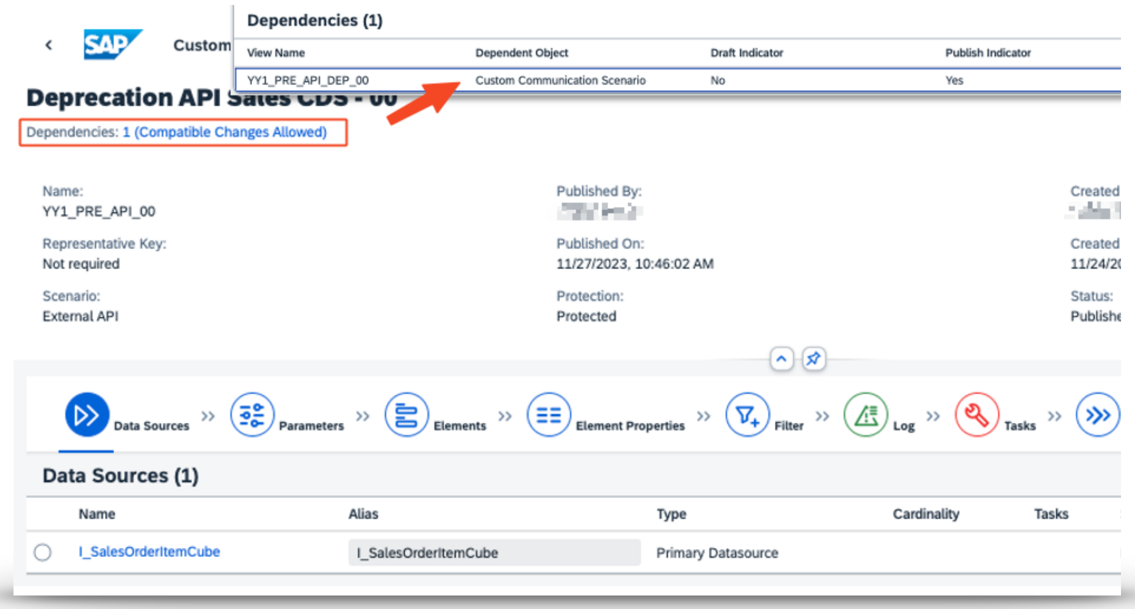
Task Priority: High
Task Category: Deprecation

Custom Communication Scenario

Communication Scenario CDS PRE

As soon as we get into the detail screen of the custom CDS, there is no evident deprecation information being brought to our attention. However, we have in the top left an indication that Dependencies exist and Compatible changes are allowed. This means that this custom CDS is used by another object and we can only make changes that will not affect or break the object that is using our custom CDS. For example, you would not want to be able to just delete a field from your custom CDS, if it was used by, as in this case a communication scenario!

Clicking on the hyperlink titled (Compatible Changes Allowed), will open a pop-up window showing you the actual name and object type of the object(s) that uses the custom CDS.



Dependencies (1)

View Name	Dependent Object	Draft Indicator	Publish Indicator
YY1_PRE_API_DEP_00	Custom Communication Scenario	No	Yes

Deprecation API Sales CDS - 00

Dependencies: 1 (Compatible Changes Allowed)

Name:
YY1_PRE_API_00

Representative Key:
Not required

Scenario:
External API

Published By:
[redacted]

Published On:
11/27/2023, 10:46:02 AM

Protection:
Protected

Created
[redacted]

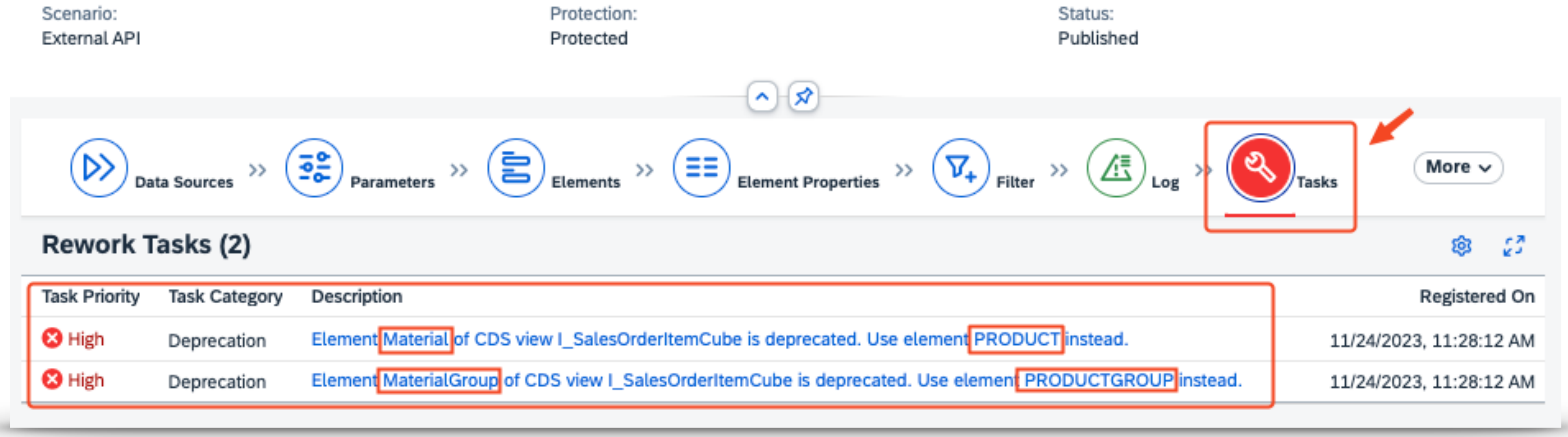
Created
11/24/2

Status:
Publishe

Data Sources (1)

Name	Alias	Type	Cardinality	Tasks
○ I_SalesOrderItemCube	I_SalesOrderItemCube	Primary Datasource		

We then move on to the Tasks tab, and in the Rework Tasks section, get more prescriptive information, clearly telling us what is deprecated as well as the successor object(s). Note that in this case we have rework tasks that pertain to CDS elements only.



Scenario:
External API

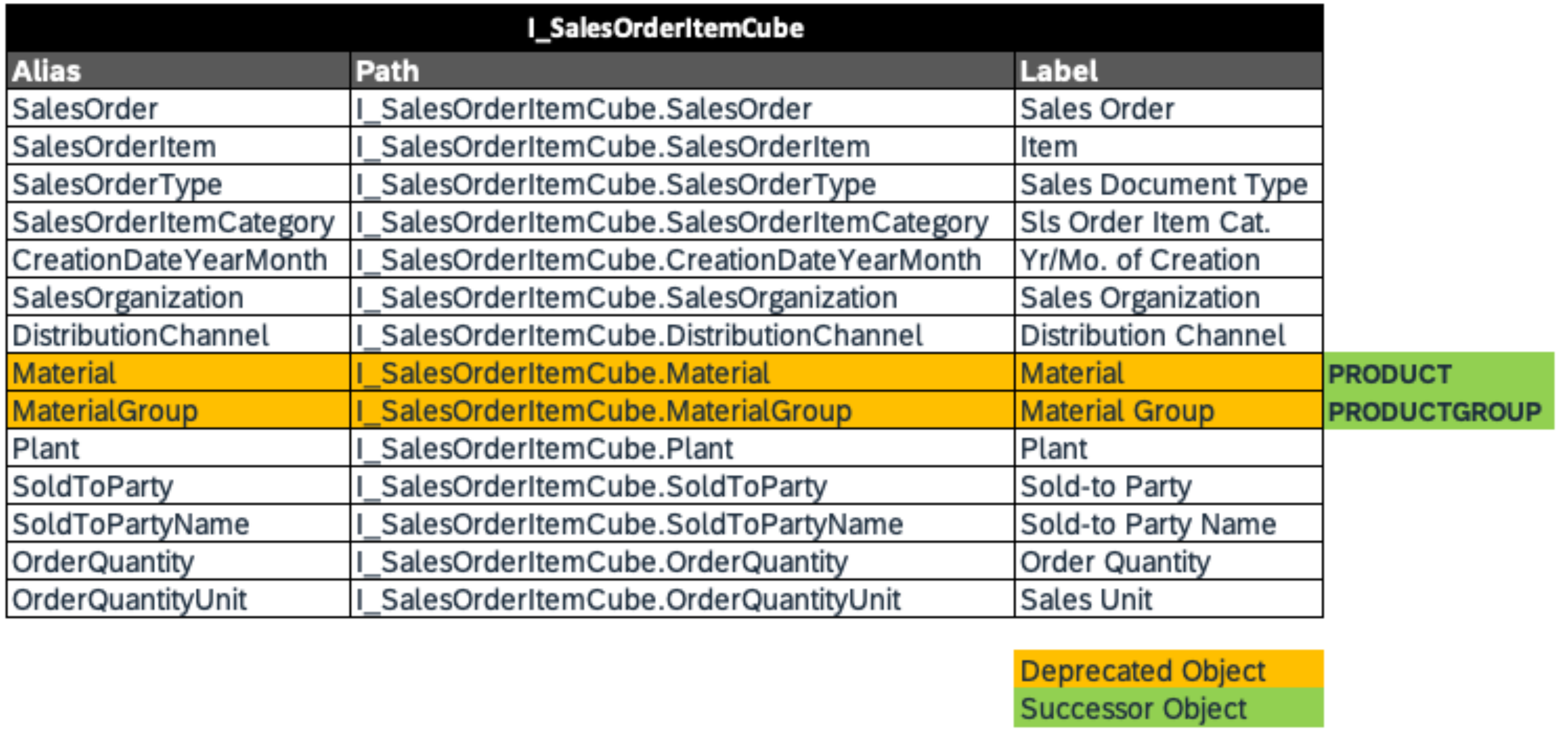
Protection:
Protected

Status:
Published

Rework Tasks (2)

Task Priority	Task Category	Description	Registered On
High	Deprecation	Element Material of CDS view I_SalesOrderItemCube is deprecated. Use element PRODUCT instead.	11/24/2023, 11:28:12 AM
High	Deprecation	Element MaterialGroup of CDS view I_SalesOrderItemCube is deprecated. Use element PRODUCTGROUP instead.	11/24/2023, 11:28:12 AM

On the basis of the information found in the Tasks tab, we can update our Custom CDS data schema, and add to it the Successor information we have now confirmed. Next to the deprecated objects, we have added the successor information.



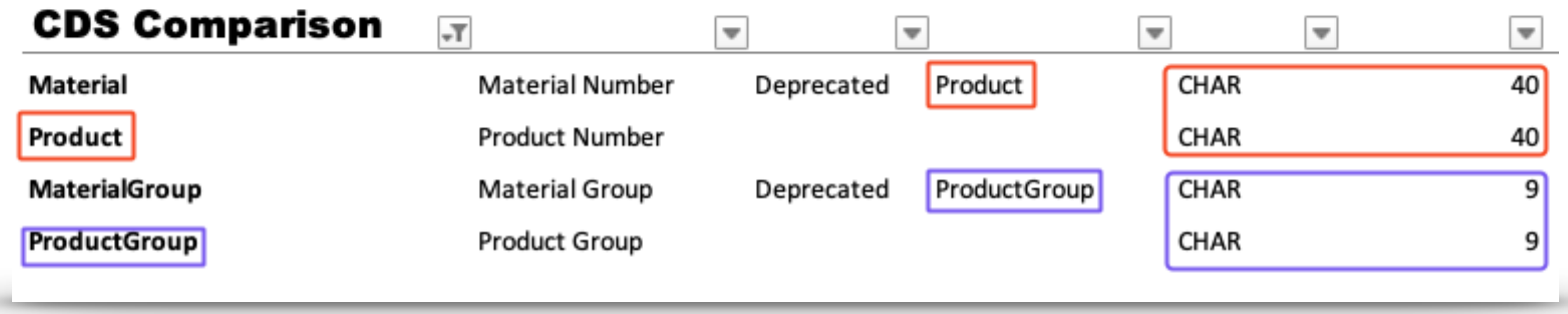
I_SalesOrderItemCube

Alias	Path	Label	
SalesOrder	I_SalesOrderItemCube.SalesOrder	Sales Order	
SalesOrderItem	I_SalesOrderItemCube.SalesOrderItem	Item	
SalesOrderType	I_SalesOrderItemCube.SalesOrderType	Sales Document Type	
SalesOrderItemCategory	I_SalesOrderItemCube.SalesOrderItemCategory	Sls Order Item Cat.	
CreationDateYearMonth	I_SalesOrderItemCube.CreationDateYearMonth	Yr/Mo. of Creation	
SalesOrganization	I_SalesOrderItemCube.SalesOrganization	Sales Organization	
DistributionChannel	I_SalesOrderItemCube.DistributionChannel	Distribution Channel	
Material	I_SalesOrderItemCube.Material	Material	PRODUCT
MaterialGroup	I_SalesOrderItemCube.MaterialGroup	Material Group	PRODUCTGROUP
Plant	I_SalesOrderItemCube.Plant	Plant	
SoldToParty	I_SalesOrderItemCube.SoldToParty	Sold-to Party	
SoldToPartyName	I_SalesOrderItemCube.SoldToPartyName	Sold-to Party Name	
OrderQuantity	I_SalesOrderItemCube.OrderQuantity	Order Quantity	
OrderQuantityUnit	I_SalesOrderItemCube.OrderQuantityUnit	Sales Unit	

Deprecated Object
Successor Object

With respect to the deprecated CDS elements, it could be that the successor CDS elements are different. For sure we know the name will be different, but it can also rarely happen that the data format will be different - for example, is the length of the successor field still X characters long? Is the field still of type CHAR? As this can have an effect on how the data will be presented and interpreted in the calling application, this needs to be checked. As we covered earlier, you could do this by checking the View Browser app in your system, or you could check the SAP Business Accelerator Hub, or you could use the Excel tool we have purposefully created for this purpose. You can download it here. We used this tool to pull the CDS entity information. We can see that the successor information is advertised (we know which field is the successor) so we can quickly compare it with the deprecated field.

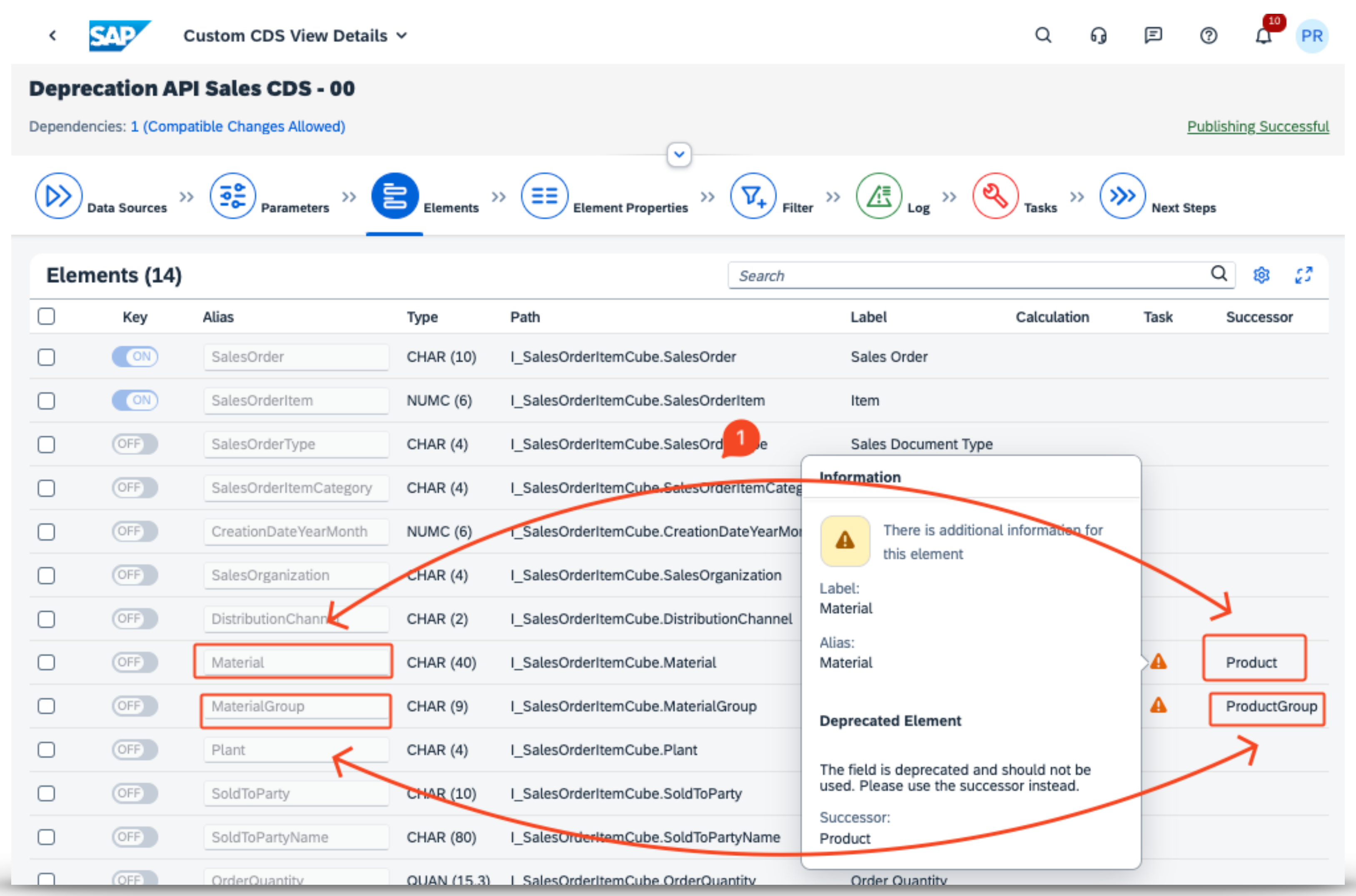
We can below, see that our deprecated and successor fields are identical in terms of data format and length. That will be one less thing to worry about!



CDS Comparison					
Material	Material Number	Deprecated	Product	CHAR	40
Product	Product Number			CHAR	40
MaterialGroup	Material Group	Deprecated	ProductGroup	CHAR	9
ProductGroup	Product Group			CHAR	9

We can also look at the Elements tab, which also provides us with essential information. We can see:

1. A clear indication of those fields that are deprecated, as well as an indication of the successor field that we should be using.



Deprecation API Sales CDS - 00

Dependencies: 1 (Compatible Changes Allowed)

Publishing Successful

Elements (14)

Search

□	Key	Alias	Type	Path	Label	Calculation	Task	Successor
□	ON	SalesOrder	CHAR (10)	I_SalesOrderItemCube.SalesOrder	Sales Order			
□	ON	SalesOrderItem	NUMC (6)	I_SalesOrderItemCube.SalesOrderItem	Item			
□	OFF	SalesOrderType	CHAR (4)	I_SalesOrderItemCube.SalesOrd e	Sales Document Type			
□	OFF	SalesOrderItemCategory	CHAR (4)	I_SalesOrderItemCube.SalesOrderItemCateg				
□	OFF	CreationDateYearMonth	NUMC (6)	I_SalesOrderItemCube.CreationDateYearMo				
□	OFF	SalesOrganization	CHAR (4)	I_SalesOrderItemCube.SalesOrganization				
□	OFF	DistributionChann	CHAR (2)	I_SalesOrderItemCube.DistributionChannel				
□	OFF	Material	CHAR (40)	I_SalesOrderItemCube.Material			⚠	Product
□	OFF	MaterialGroup	CHAR (9)	I_SalesOrderItemCube.MaterialGroup			⚠	ProductGroup
□	OFF	Plant	CHAR (4)	I_SalesOrderItemCube.Plant				
□	OFF	SoldToParty	CHAR (10)	I_SalesOrderItemCube.SoldToParty				
□	OFF	SoldToPartyName	CHAR (80)	I_SalesOrderItemCube.SoldToPartyName				
□	OFF	OrderQuantity	QUAN (15,3)	I_SalesOrderItemCube.OrderQuantity	Order Quantity			

Information

⚠ There is additional information for this element

Label:
Material

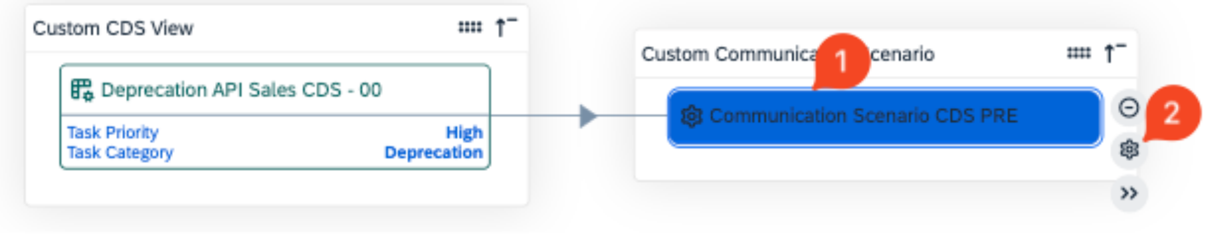
Alias:
Material

Deprecated Element

The field is deprecated and should not be used. Please use the successor instead.

Successor:
Product

We can then navigate back to the Extensibility Inventory app. This time, we will select the bound box holding the name of the custom communication scenario, which will change its colour (1) and click on the navigation icon (2) as shown to navigate to the Custom Communication Scenario.



Custom CDS View

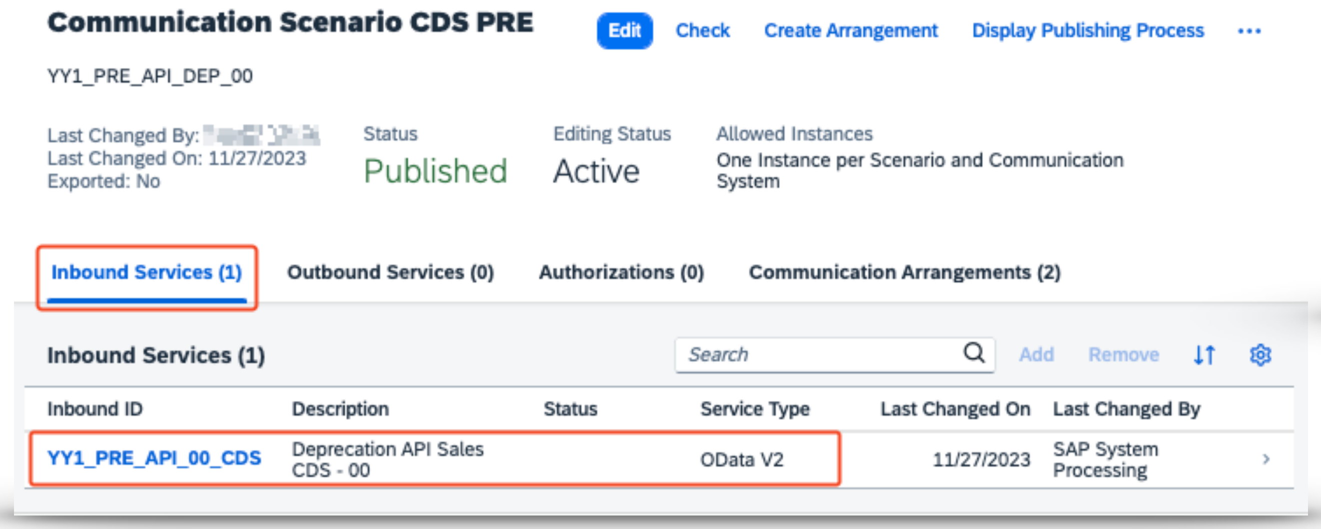
Deprecation API Sales CDS - 00

Task Priority: High
Task Category: Deprecation

Custom Communica[1]cenario

Communication Scenario CDS PRE

Once we reach the Custom Communication scenario, we see further important information such as the inbound service ID, as well as the communication arrangements that can make use of this inbound service! This is of course important as it will help you to identify which systems have been setup to access this service and verify if and how they also need to be amended, so as to continue to be able to parse the information the service will deliver once it is changed!



Communication Scenario CDS PRE

YY1_PRE_API_DEP_00

Last Changed By: [redacted]
Last Changed On: 11/27/2023
Exported: No

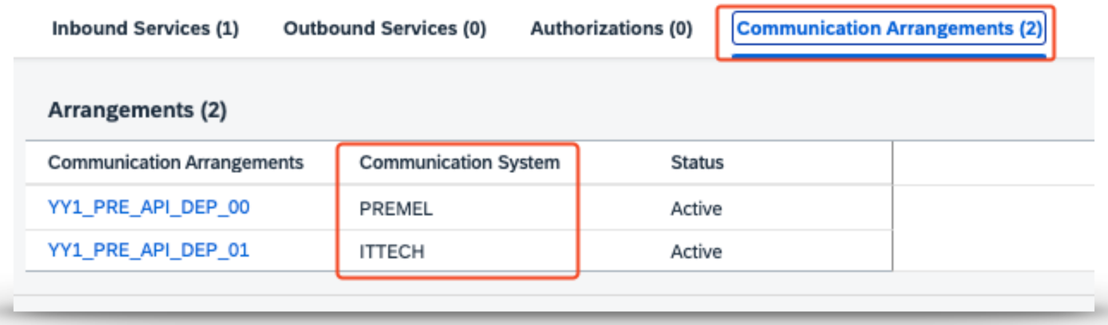
Status: Published

Editing Status: Active

Allowed Instances: One Instance per Scenario and Communication System

Inbound Services (1)

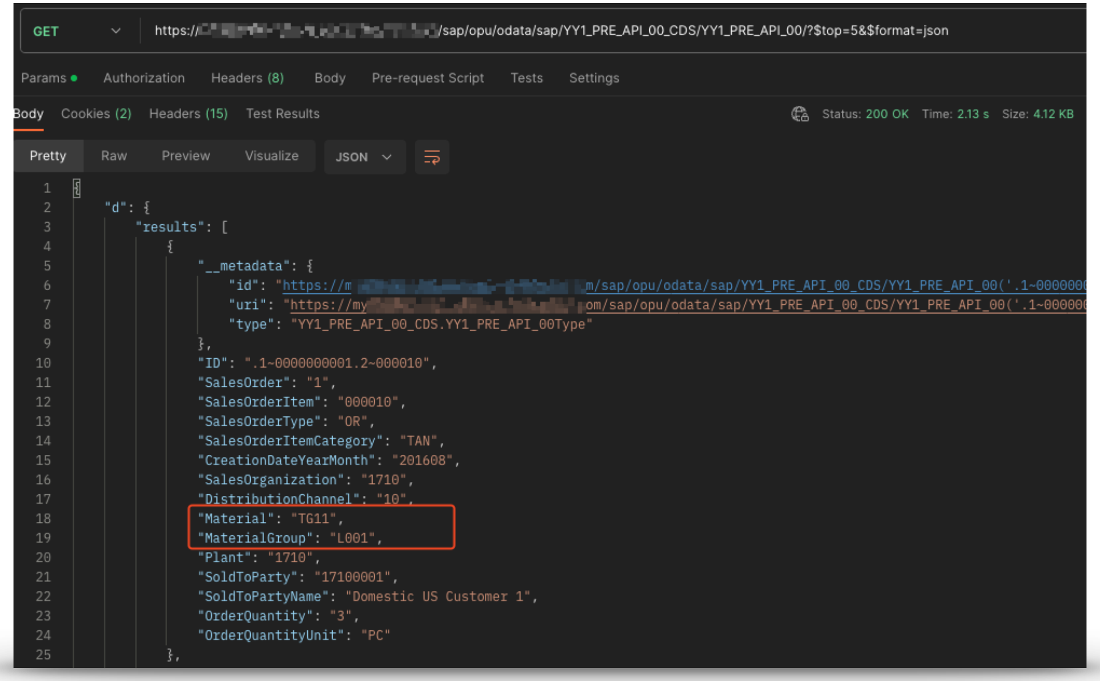
Inbound ID	Description	Status	Service Type	Last Changed On	Last Changed By
YY1_PRE_API_00_CDS	Deprecation API Sales CDS - 00		OData V2	11/27/2023	SAP System Processing



Arrangements (2)

Communication Arrangements	Communication System	Status
YY1_PRE_API_DEP_00	PREMEL	Active
YY1_PRE_API_DEP_01	ITTECH	Active

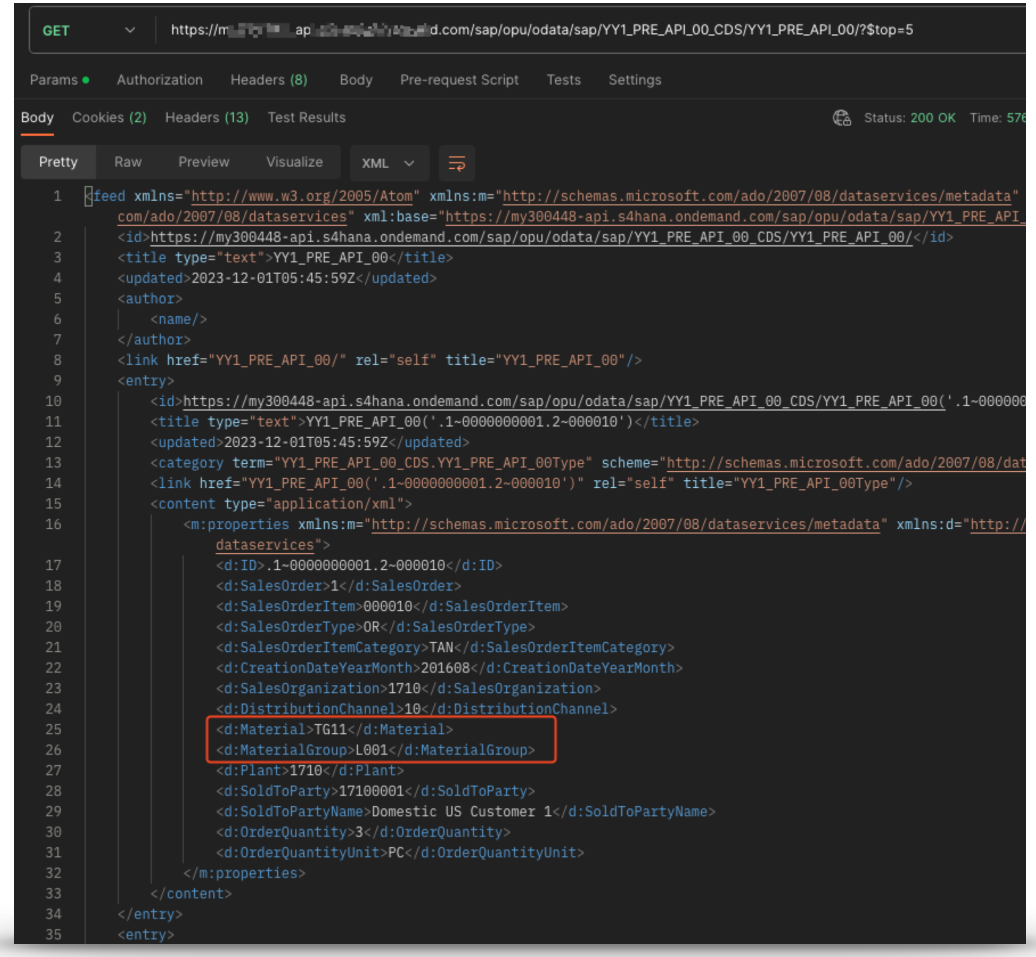
Much like the previous use case, before you make any changes on the SAP side, we would recommend that you extract a sample of your data so as to be able to make before/after comparisons of your changes. In this case, as we are looking at an API, we would recommend that you make an extract of your data, using the Data Browser (directly from the CDS), as well as sample payloads, to make sure/check that the syntax is still the same, or you are able to identify the differences. You would also want to have sufficient data to verify each of your scenarios. I.e do you have Materials codes that have different formats (some are only numerical, some are character or some are alphanumerical). In our case we have made several extracts of both xml and json payloads.



GET https://[redacted]/sap/opu/odata/sap/YY1_PRE_API_00_CDS/YY1_PRE_API_00/?$top=5&$format=json

Status: 200 OK Time: 2.13 s Size: 4.12 KB

```
{
    "d": {
        "results": [
            {
                "__metadata": {
                    "id": "https://m[redacted]m/sap/opu/odata/sap/YY1_PRE_API_00_CDS/YY1_PRE_API_00('.1~000000
                    "uri": "https://my[redacted]om/sap/opu/odata/sap/YY1_PRE_API_00_CDS/YY1_PRE_API_00('.1~000000
                    "type": "YY1_PRE_API_00_CDS.YY1_PRE_API_00Type"
                },
                "ID": ".1~0000000001.2~000010",
                "SalesOrder": "1",
                "SalesOrderItem": "000010",
                "SalesOrderType": "OR",
                "SalesOrderItemCategory": "TAN",
                "CreationDateYearMonth": "201608",
                "SalesOrganization": "1710",
                "DistributionChannel": "10",
                "Material": "TG11",
                "MaterialGroup": "L001",
                "Plant": "1710",
                "SoldToParty": "17100001",
                "SoldToPartyName": "Domestic US Customer 1",
                "OrderQuantity": "3",
                "OrderQuantityUnit": "PC"
            },
```

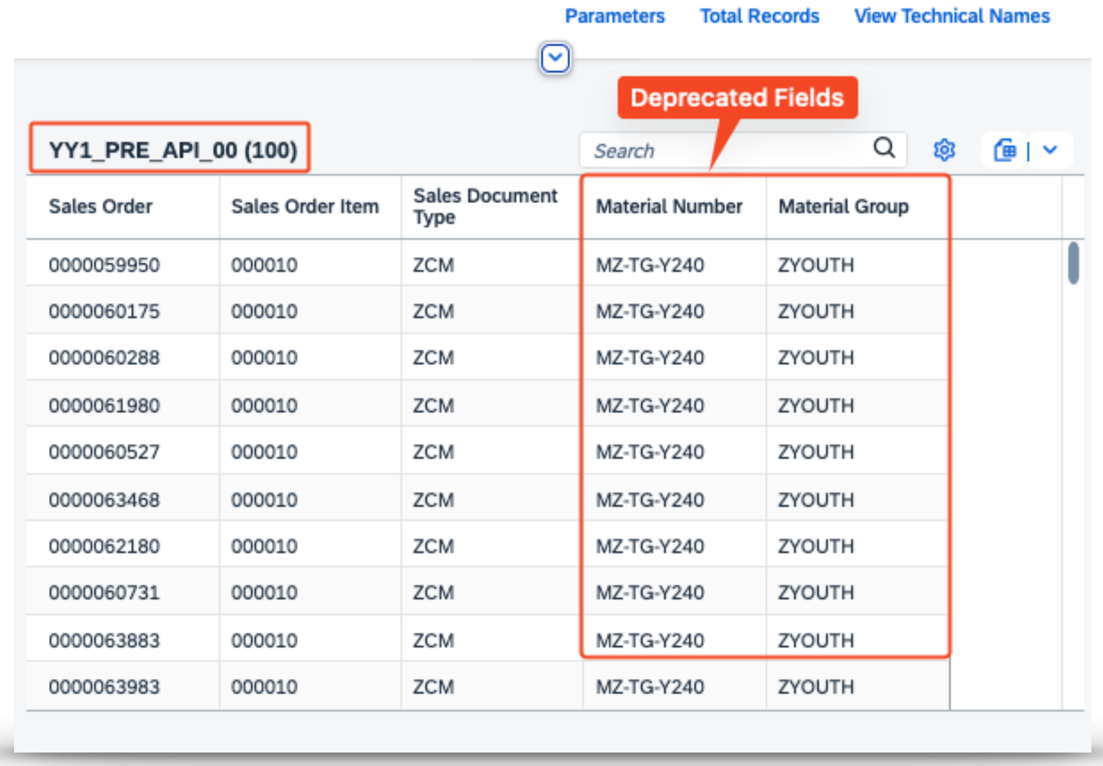


GET https://m[redacted]ap[redacted]d.com/sap/opu/odata/sap/YY1_PRE_API_00_CDS/YY1_PRE_API_00/?$top=5

Status: 200 OK Time: 576

```
<feed xmlns="http://www.w3.org/2005/Atom" xmlns:m="http://schemas.microsoft.com/ado/2007/08/dataservices/metadata"
    com/ado/2007/08/dataservices" xml:base="https://my300448-api.s4hana.ondemand.com/sap/opu/odata/sap/YY1_PRE_API_
    <id>https://my300448-api.s4hana.ondemand.com/sap/opu/odata/sap/YY1_PRE_API_00_CDS/YY1_PRE_API_00/</id>
    <title type="text">YY1_PRE_API_00</title>
    <updated>2023-12-01T05:45:59Z</updated>
    <author>
        <name/>
    </author>
    <link href="YY1_PRE_API_00/" rel="self" title="YY1_PRE_API_00"/>
    <entry>
        <id>https://my300448-api.s4hana.ondemand.com/sap/opu/odata/sap/YY1_PRE_API_00_CDS/YY1_PRE_API_00('.1~000000
        <title type="text">YY1_PRE_API_00('.1~0000000001.2~000010')</title>
        <updated>2023-12-01T05:45:59Z</updated>
        <category term="YY1_PRE_API_00_CDS.YY1_PRE_API_00Type" scheme="http://schemas.microsoft.com/ado/2007/08/dat
        <link href="YY1_PRE_API_00('.1~0000000001.2~000010')" rel="self" title="YY1_PRE_API_00Type"/>
        <content type="application/xml">
            <m:properties xmlns:m="http://schemas.microsoft.com/ado/2007/08/dataservices/metadata" xmlns:d="http://
                dataservices">
                <d:ID>.1~0000000001.2~000010</d:ID>
                <d:SalesOrder>1</d:SalesOrder>
                <d:SalesOrderItem>000010</d:SalesOrderItem>
                <d:SalesOrderType>OR</d:SalesOrderType>
                <d:SalesOrderItemCategory>TAN</d:SalesOrderItemCategory>
                <d:CreationDateYearMonth>201608</d:CreationDateYearMonth>
                <d:SalesOrganization>1710</d:SalesOrganization>
                <d:DistributionChannel>10</d:DistributionChannel>
                <d:Material>TG11</d:Material>
                <d:MaterialGroup>L001</d:MaterialGroup>
                <d:Plant>1710</d:Plant>
                <d:SoldToParty>17100001</d:SoldToParty>
                <d:SoldToPartyName>Domestic US Customer 1</d:SoldToPartyName>
                <d:OrderQuantity>3</d:OrderQuantity>
                <d:OrderQuantityUnit>PC</d:OrderQuantityUnit>
            </m:properties>
        </content>
    </entry>
    <entry>
```

We have also made a customer data browser extract that includes at least the deprecated fields.



YY1_PRE_API_00 (100)

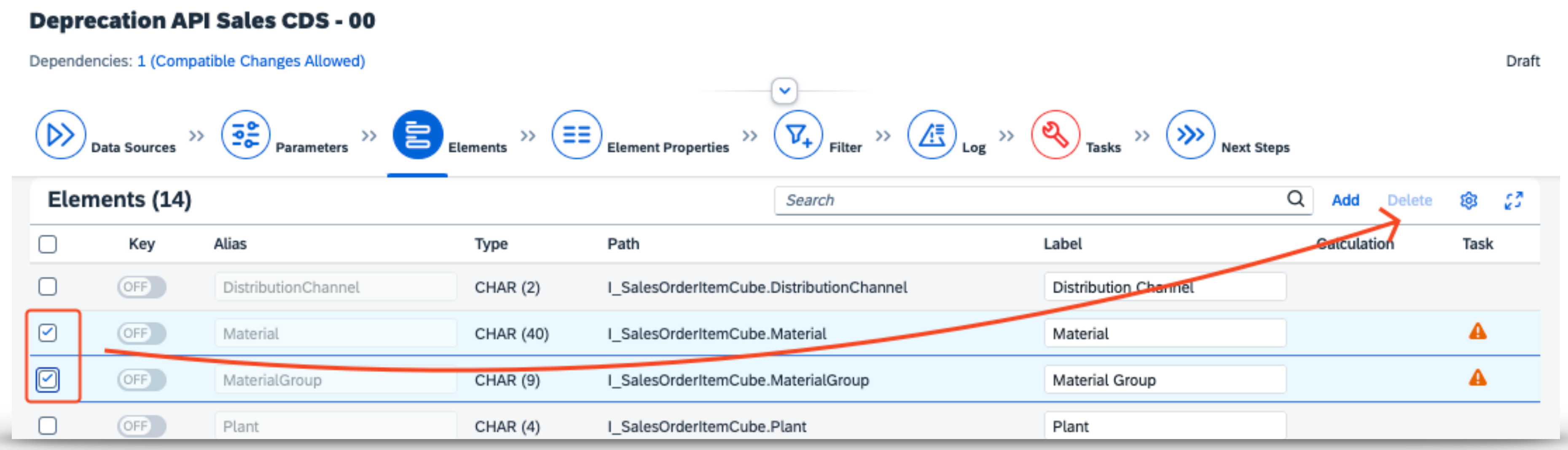
Sales Order	Sales Order Item	Sales Document Type	Material Number	Material Group
0000059950	000010	ZCM	MZ-TG-Y240	ZYOUTH
0000060175	000010	ZCM	MZ-TG-Y240	ZYOUTH
0000060288	000010	ZCM	MZ-TG-Y240	ZYOUTH
0000061980	000010	ZCM	MZ-TG-Y240	ZYOUTH
0000060527	000010	ZCM	MZ-TG-Y240	ZYOUTH
0000063468	000010	ZCM	MZ-TG-Y240	ZYOUTH
0000062180	000010	ZCM	MZ-TG-Y240	ZYOUTH
0000060731	000010	ZCM	MZ-TG-Y240	ZYOUTH
0000063883	000010	ZCM	MZ-TG-Y240	ZYOUTH
0000063983	000010	ZCM	MZ-TG-Y240	ZYOUTH

The Process

Now that we have done our analysis, we know what we need to change and where we need to change things, and we have also made backups of our data so we can make before change and after change comparisons at every step of the way.

Logically, one might think that we will start at the bottom and make our way up the chain of objects. By that I mean that, one might think that it would be easy enough to remove the deprecated fields from the custom CDS, add the successor fields in the custom CDS, save and publish and we are done. Unfortunately, in practice it does not work quite like this, because our custom communication scenario is using all the fields from our CDS.

To illustrate this, let's for example go to our custom CDS into edit mode and try to remove one of the deprecated fields —> `Material`. As you can see, the Delete button remains invariably inaccessible - because deleting this field would be an incompatible change (as the field is used in the Custom Communication Scenario). However, we can see that the Add option is available, so we can add - successor fields.



Deprecation API Sales CDS - 00

Dependencies: 1 (Compatible Changes Allowed)

Draft

Elements (14)

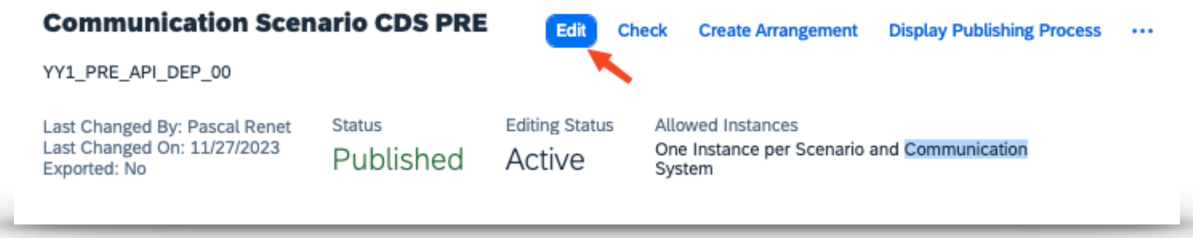
☐	Key	Alias	Type	Path	Label	Calculation	Task
☐	OFF	DistributionChannel	CHAR (2)	I_SalesOrderItemCube.DistributionChannel	Distribution Channel		
☑	OFF	Material	CHAR (40)	I_SalesOrderItemCube.Material	Material		⚠
☑	OFF	MaterialGroup	CHAR (9)	I_SalesOrderItemCube.MaterialGroup	Material Group		⚠
☐	OFF	Plant	CHAR (4)	I_SalesOrderItemCube.Plant	Plant		
]

So, like in the previous use case, we must do a change somewhere else first that will then allow us to remove the deprecated fields from the Custom CDS. That somewhere else, is the custom communication scenario.

In the previous use case, we started by making some changes in the custom CDS (we added the successor field), then went to the analytical query, and it is only at the very end that we came back to the CDS to finally remove the deprecated fields. This time we will operate differently and leave the custom CDS alone for the time being.

Step 1 - Amending the Custom communication scenario

We start by going to the Custom Communication scenario app because that is what is keeping us from changing the underlying custom CDS. We go into our communication scenario, and switch to edit mode, so that we can make some changes to it.



Communication Scenario CDS PRE

YY1_PRE_API_DEP_00

Last Changed By: Pascal Renet
Last Changed On: 11/27/2023
Exported: No

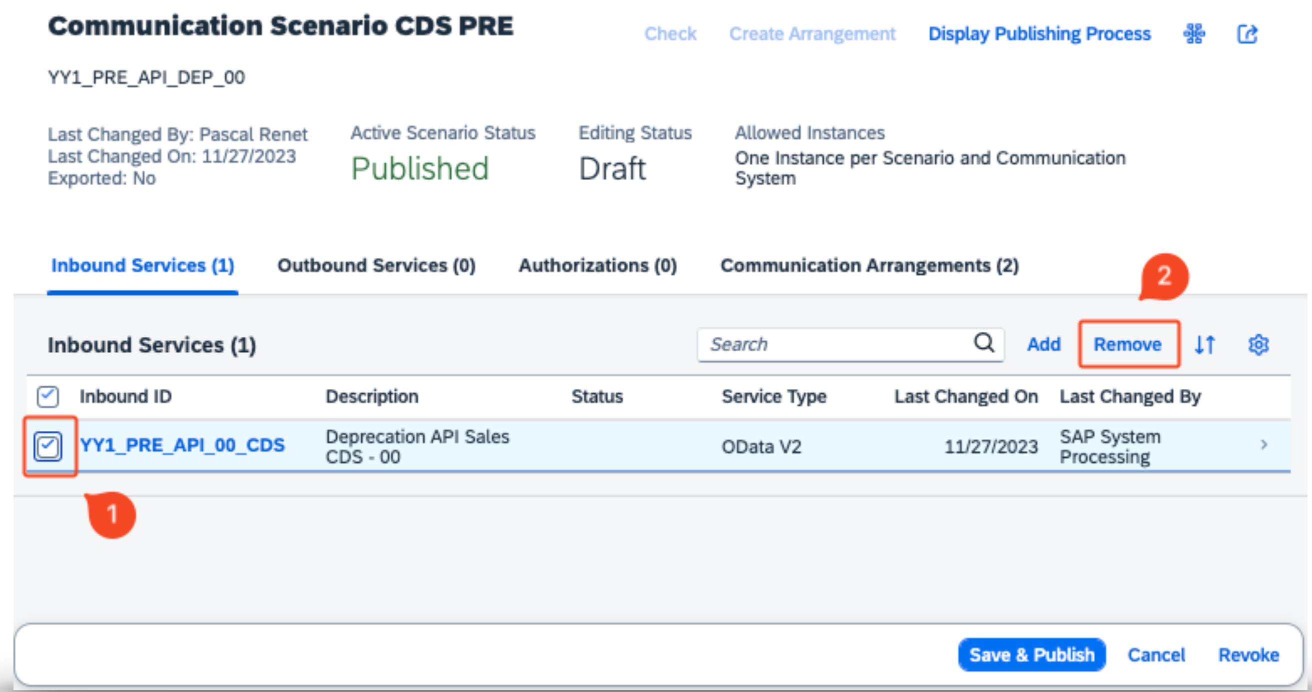
Status: Published

Editing Status: Active

Allowed Instances: One Instance per Scenario and Communication System

We are then going to:

1. Select the inbound service and
2. Click Remove, to remove it



Communication Scenario CDS PRE

YY1_PRE_API_DEP_00

Last Changed By: Pascal Renet
Last Changed On: 11/27/2023
Exported: No

Active Scenario Status: Published

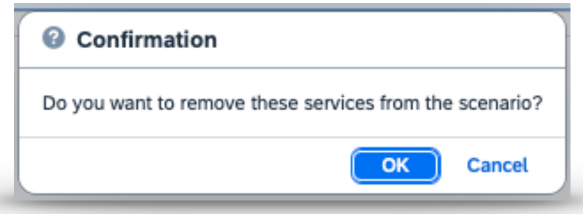
Editing Status: Draft

Allowed Instances: One Instance per Scenario and Communication System

Inbound Services (1)

☑	Inbound ID	Description	Status	Service Type	Last Changed On	Last Changed By
☑	YY1_PRE_API_00_CDS	Deprecation API Sales CDS - 00		OData V2	11/27/2023	SAP System Processing

You will then be presented with this popup. Click OK



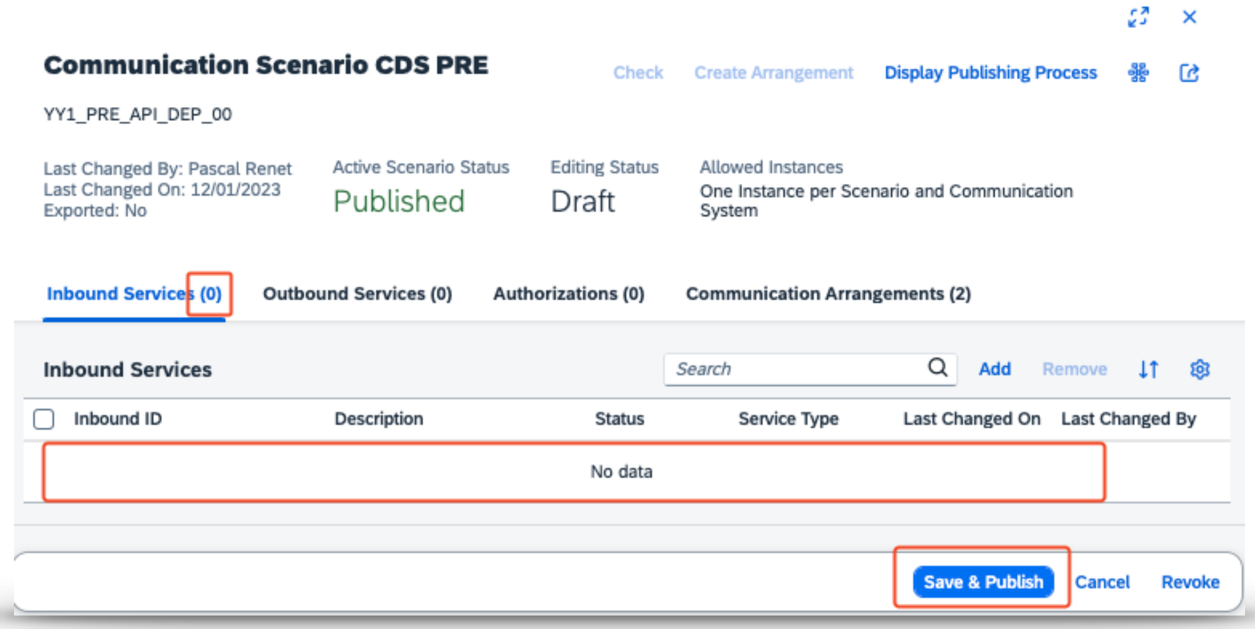
Confirmation

Do you want to remove these services from the scenario?

The Inbound service will then be removed.

Save your changes, and wait for the publishing process to finish.

At this moment, the custom CDS is no longer used by the communication scenario, so we return to the custom CDS app to proceed with the changes we want to make there.



Communication Scenario CDS PRE

YY1_PRE_API_DEP_00

Last Changed By: Pascal Renet
Last Changed On: 12/01/2023
Exported: No

Active Scenario Status: Published

Editing Status: Draft

Allowed Instances: One Instance per Scenario and Communication System

Inbound Services

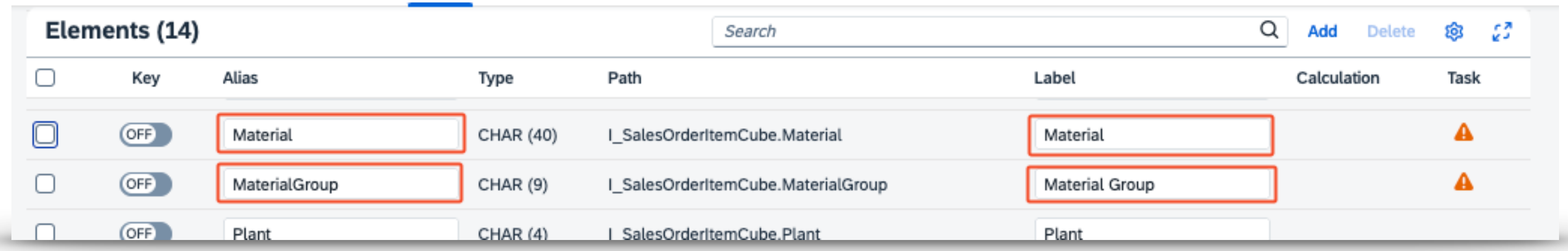
☐ Inbound ID	Description	Status	Service Type	Last Changed On	Last Changed By
No data					

Step 2 - Amending the Custom CDS

We open the Custom CDS app and switch to edit mode, to start making changes. Before we start making changes, we can ask ourselves how we want to proceed, and the answer to this question might depend on the amount of fields we are going to change and the kind of fields we are going to change (i.e do we have calculations that we need to check). If you recall, in the previous use case, we added the successor fields, but did not right away remove the deprecated ones…because we want to to be able to compare them step by step. In this case it is a little different because a) I have already saved a sample of my data before making any changes (for comparison) and b) the next time my data will be used, will be by an external application and c) if I can, I want to avoid having to make ANY changes to my 3rd party applications or integration mappings.

Another thing to consider is that I don't really want to spend more time than I need to changing my integration flow. By that I mean that if I remove the field `MATERIAL` and replace it with the field `PRODUCT`, my integration flow will break. I.e the calling application will be expecting to receive in the payload an element with the name <`Material`> but will not receive it. Can we avoid this? We had the same conundrum in the previous use case, where we could have changed the label of the UI field `Product` with `Material` (keeping the old screen name), so as to not perturb the business users, but we decided that it was best to change and use the new name. However in this case it is different. Does the calling application really need to know that this has changed? Probably not. So in this case, whilst we will be removing the deprecated fields and changing them to use the successors, we will keep the 'old - deprecated' name in the integration.

So now that we are clear, let's go to the Elements tab of our custom CDS and first note the **Alias** and **Label** of the deprecated fields that we are going to remove.

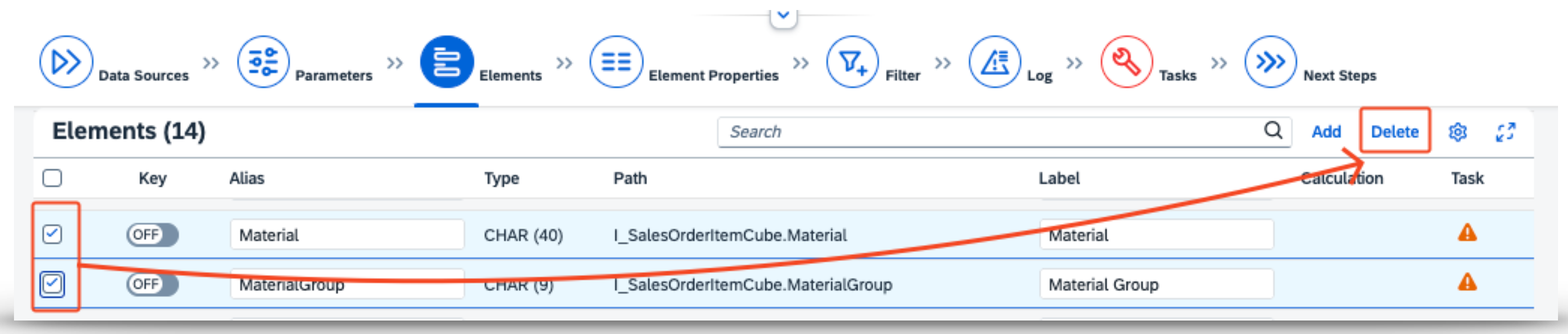


Elements (14)

☐	Key	Alias	Type	Path	Label	Calculation	Task
☐	OFF	Material	CHAR (40)	I_SalesOrderItemCube.Material	Material		⚠
☐	OFF	MaterialGroup	CHAR (9)	I_SalesOrderItemCube.MaterialGroup	Material Group		⚠
☐	OFF	Plant	CHAR (4)	I_SalesOrderItemCube.Plant	Plant		

Then, select the deprecated fields and Delete them to remove them from the custom CDS. Click ok on the popup that will be presented to confirm.

Click 'Check' to generate a draft.

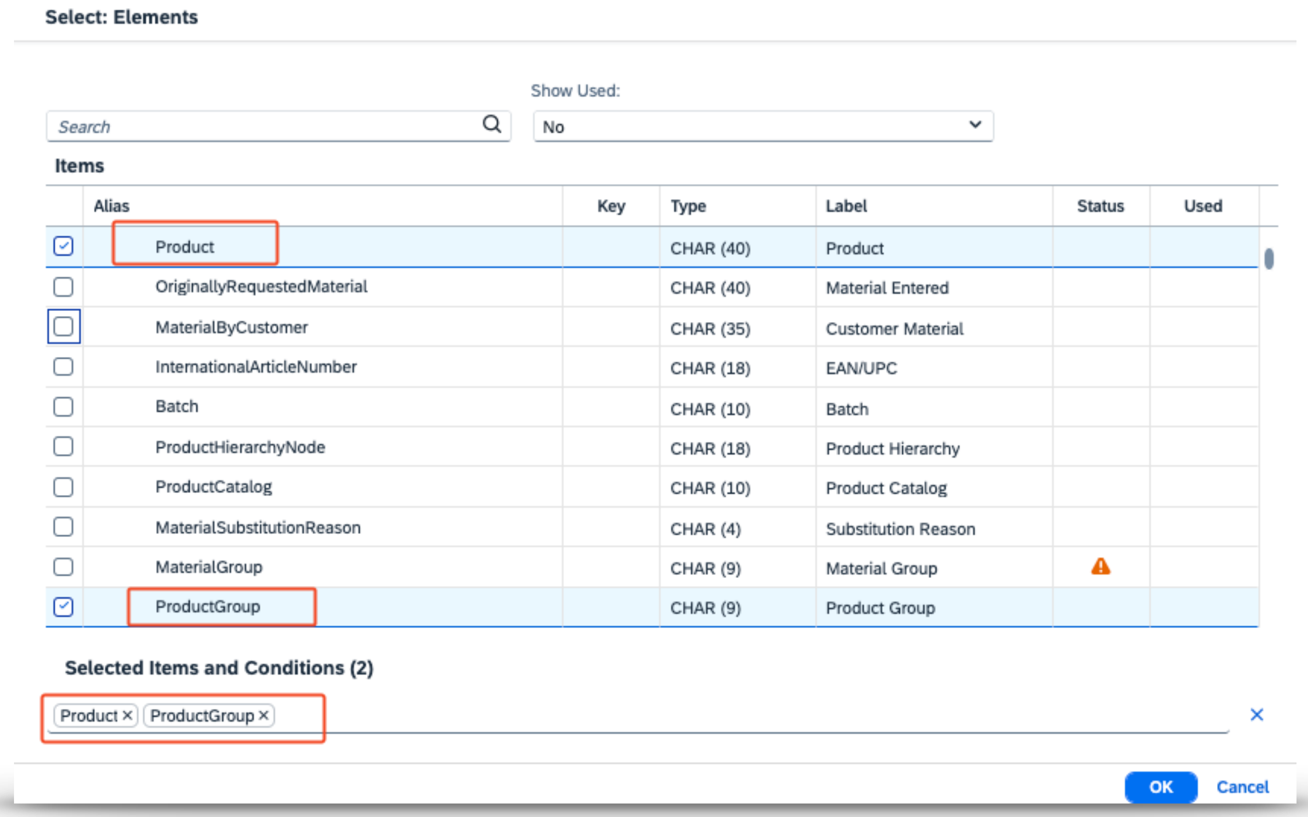


Elements (14)

☐	Key	Alias	Type	Path	Label	Calculation	Task
☑	OFF	Material	CHAR (40)	I_SalesOrderItemCube.Material	Material		⚠
☑	OFF	MaterialGroup	CHAR (9)	I_SalesOrderItemCube.MaterialGroup	Material Group		⚠

Now click 'Add' to add the successor elements (which were Product and Product Group).

NOTE: It is worthwhile noting that the successor fields we just added will be tacked to the end of the CDS entity (I.e not positioned in the same place where the deprecated fields were). This is done on purpose, but we will later show how you can move the placement of fields.



Select: Elements

Show Used: No

Items

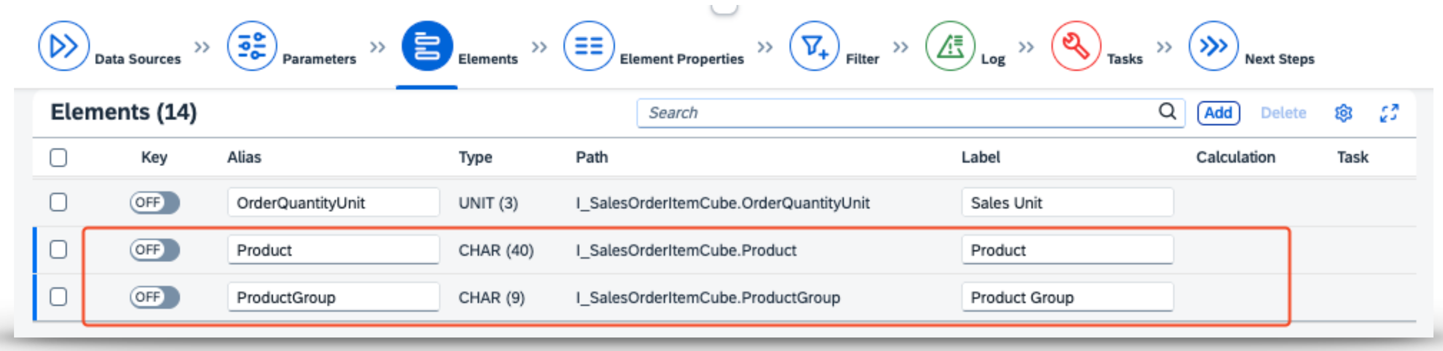
	Alias	Key	Type	Label	Status	Used
☑	Product		CHAR (40)	Product		
☐	OriginallyRequestedMaterial		CHAR (40)	Material Entered		
☐	MaterialByCustomer		CHAR (35)	Customer Material		
☐	InternationalArticleNumber		CHAR (18)	EAN/UPC		
☐	Batch		CHAR (10)	Batch		
☐	ProductHierarchyNode		CHAR (18)	Product Hierarchy		
☐	ProductCatalog		CHAR (10)	Product Catalog		
☐	MaterialSubstitutionReason		CHAR (4)	Substitution Reason		
☐	MaterialGroup		CHAR (9)	Material Group	⚠	
☑	ProductGroup		CHAR (9)	Product Group		

Selected Items and Conditions (2)

Product × ProductGroup ×

Our successor fields are now added to the Custom CDS.

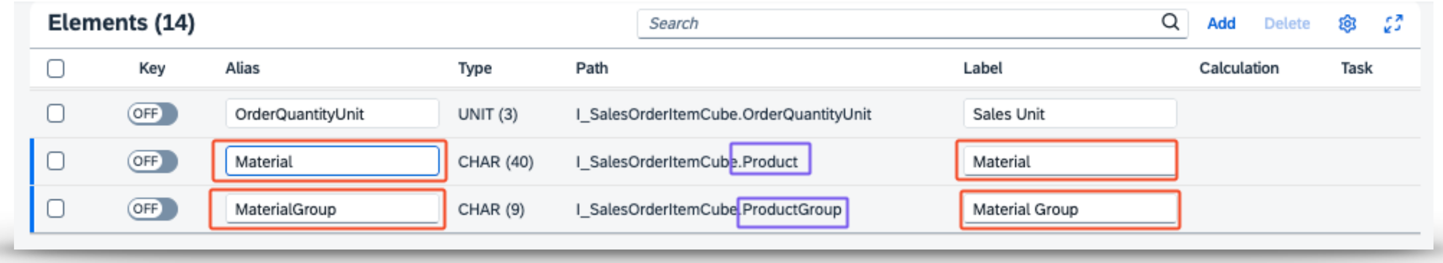
We now need to rename them, so that their names (alias and label) are identical to the deprecated fields we removed.



Elements (14)

☐	Key	Alias	Type	Path	Label	Calculation	Task
☐	OFF	OrderQuantityUnit	UNIT (3)	I_SalesOrderItemCube.OrderQuantityUnit	Sales Unit		
☐	OFF	Product	CHAR (40)	I_SalesOrderItemCube.Product	Product		
☐	OFF	ProductGroup	CHAR (9)	I_SalesOrderItemCube.ProductGroup	Product Group		

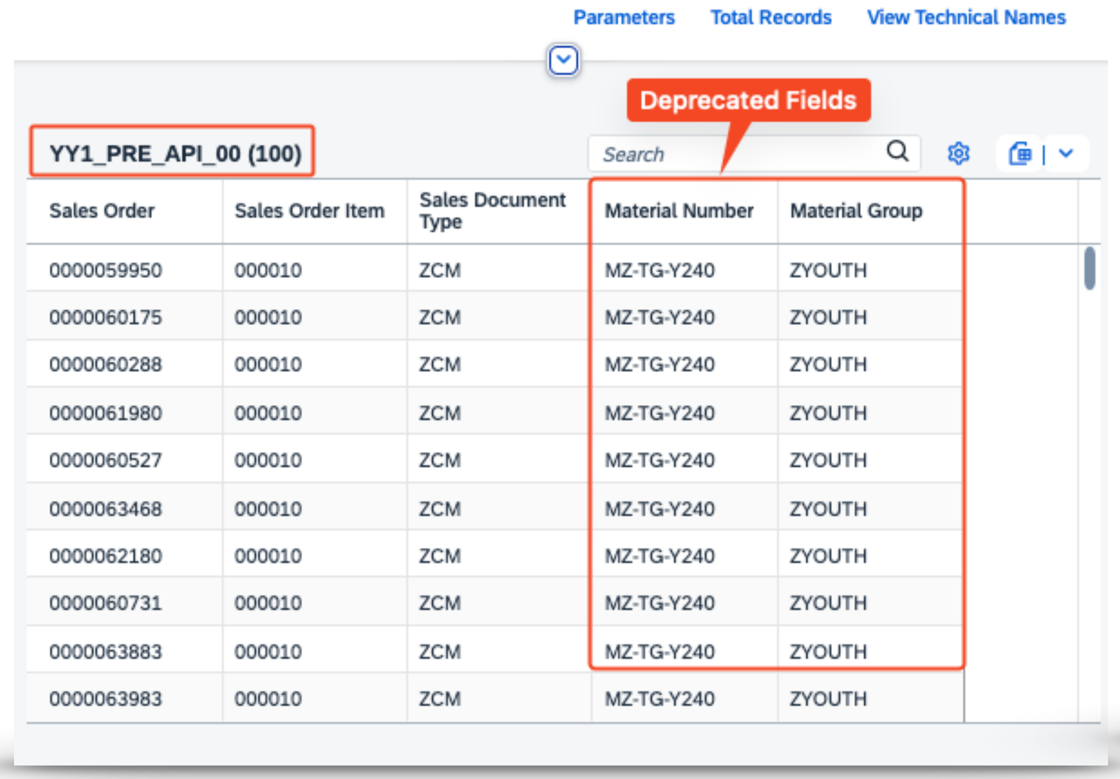
We now have field aliases and labels that are identical to the deprecated fields, but the source of the data is indeed the successor element! Do a check, and if OK, publish your changes.



Elements (14)

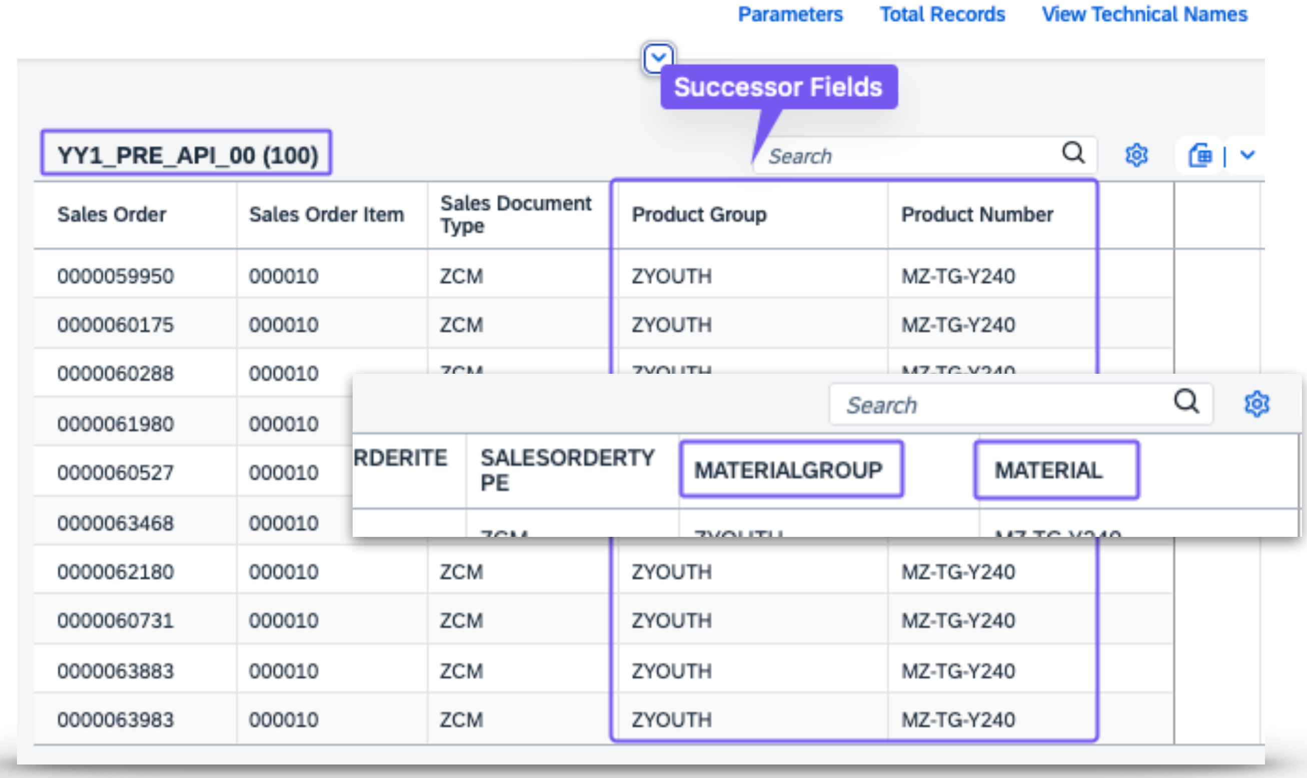
☐	Key	Alias	Type	Path	Label	Calculation	Task
☐	OFF	OrderQuantityUnit	UNIT (3)	I_SalesOrderItemCube.OrderQuantityUnit	Sales Unit		
☐	OFF	Material	CHAR (40)	I_SalesOrderItemCube.Product	Material		
☐	OFF	MaterialGroup	CHAR (9)	I_SalesOrderItemCube.ProductGroup	Material Group		

Before we leave the custom CDS, let's do a before after change comparison to make sure the required data is still coming through, by using the Data Browser. We can see that the before change (left) data we saved is identical to the after (right) change data. We also see that the UI name of the successor fields is showing the Successor names, but if we switch to the Technical Names view, we see that the deprecated technical names are used to describe the successor fields !



YY1_PRE_API_00 (100)

Sales Order	Sales Order Item	Sales Document Type	Material Number	Material Group
0000059950	000010	ZCM	MZ-TG-Y240	ZYOUTH
0000060175	000010	ZCM	MZ-TG-Y240	ZYOUTH
0000060288	000010	ZCM	MZ-TG-Y240	ZYOUTH
0000061980	000010	ZCM	MZ-TG-Y240	ZYOUTH
0000060527	000010	ZCM	MZ-TG-Y240	ZYOUTH
0000063468	000010	ZCM	MZ-TG-Y240	ZYOUTH
0000062180	000010	ZCM	MZ-TG-Y240	ZYOUTH
0000060731	000010	ZCM	MZ-TG-Y240	ZYOUTH
0000063883	000010	ZCM	MZ-TG-Y240	ZYOUTH
0000063983	000010	ZCM	MZ-TG-Y240	ZYOUTH

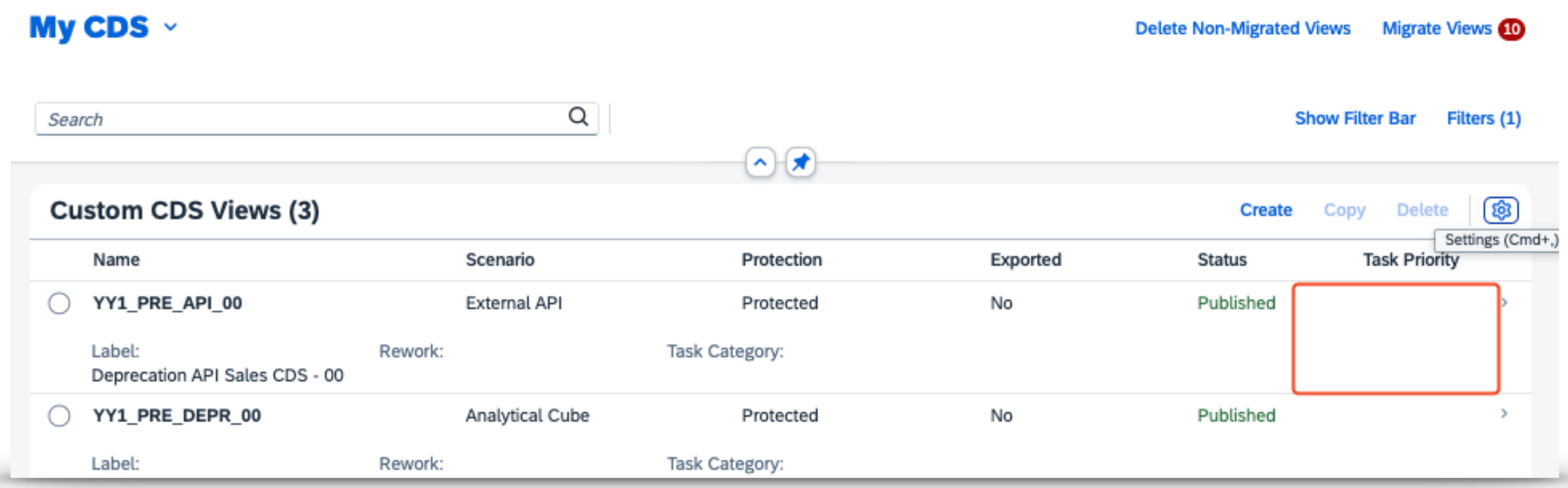


YY1_PRE_API_00 (100)

Sales Order	Sales Order Item	Sales Document Type	Product Group	Product Number
0000059950	000010	ZCM	ZYOUTH	MZ-TG-Y240
0000060175	000010	ZCM	ZYOUTH	MZ-TG-Y240
0000060288	000010	ZCM	ZYOUTH	MZ-TG-Y240
0000061980	000010			
0000060527	000010			
0000063468	000010			
0000062180	000010	ZCM	ZYOUTH	MZ-TG-Y240
0000060731	000010	ZCM	ZYOUTH	MZ-TG-Y240
0000063883	000010	ZCM	ZYOUTH	MZ-TG-Y240
0000063983	000010	ZCM	ZYOUTH	MZ-TG-Y240

RDERITE	SALESORDERTYPE	MATERIALGROUP	MATERIAL
	ZCM	ZYOUTH	MZ-TG-Y240

Lastly, we can also confirm in the custom CDS list view that, our custom CDS no longer has any Deprecation rework tasks assigned to it !



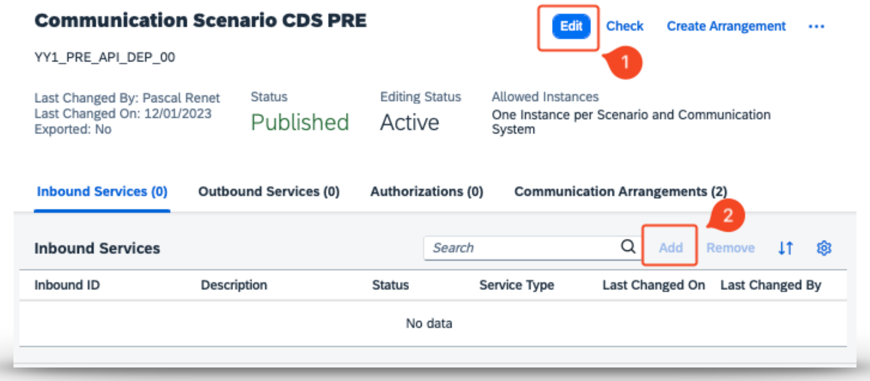
Custom CDS Views (3)

	Name	Scenario	Protection	Exported	Status	Task Priority
○	YY1_PRE_API_00	External API	Protected	No	Published	
	Label: Deprecation API Sales CDS - 00	Rework:	Task Category:			
○	YY1_PRE_DEPR_00	Analytical Cube	Protected	No	Published	
	Label:	Rework:	Task Category:			

Step 3 - Amending the Custom Communication Scenario

Our Custom CDS changes completed and after having confirmed that the correct data is still coming through, we open the Custom Communication App, so as to once again add the inbound service back to it.

We start by switching to edit mode (1), and then, once it becomes active, we select Add (2).



Communication Scenario CDS PRE

YY1_PRE_API_DEP_00

Last Changed By: Pascal Renet
Last Changed On: 12/01/2023
Exported: No

Status: Published

Editing Status: Active

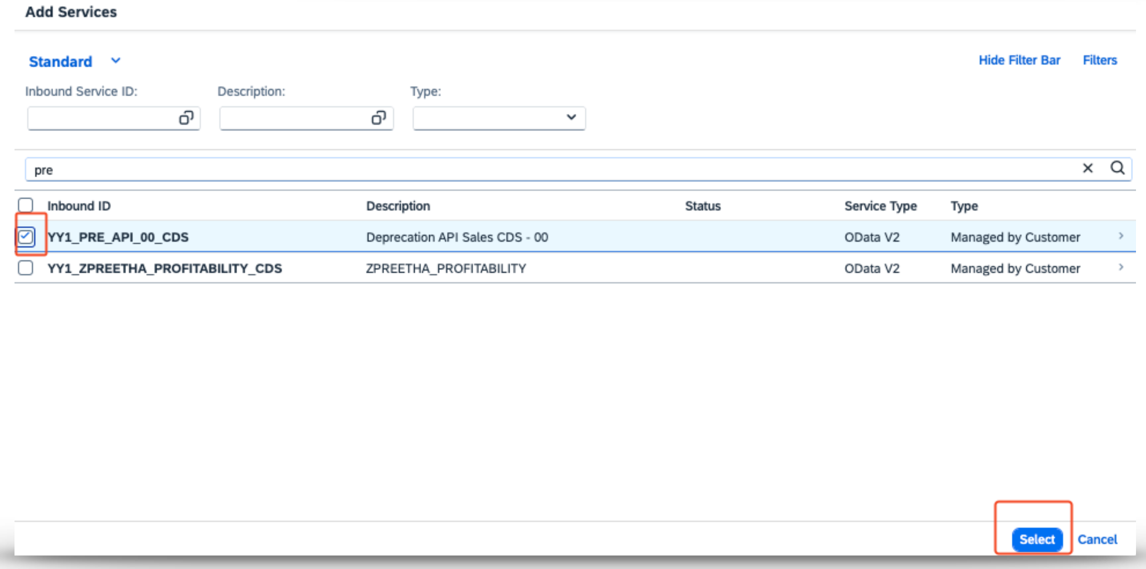
Allowed Instances: One Instance per Scenario and Communication System

Inbound Services (0) | Outbound Services (0) | Authorizations (0) | Communication Arrangements (2)

Inbound Services

Inbound ID	Description	Status	Service Type	Last Changed On	Last Changed By
No data					

Search and select your Custom CDS and click the Select button.



Add Services

Inbound Service ID:

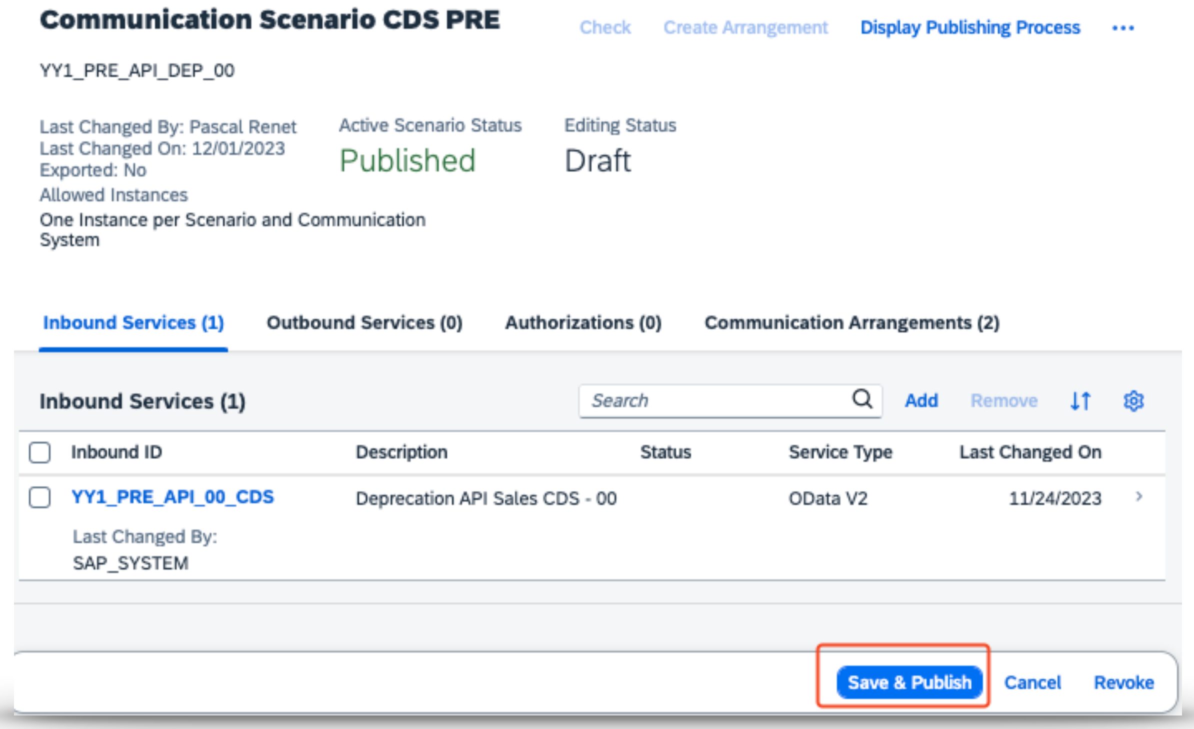
Description:

Type:

pre

	Inbound ID	Description	Status	Service Type	Type
☑	YY1_PRE_API_00_CDS	Deprecation API Sales CDS - 00		OData V2	Managed by Customer
□	YY1_ZPREETHA_PROFITABILITY_CDS	ZPREETHA_PROFITABILITY		OData V2	Managed by Customer

Once your Custom CDS appears in the Inbound Services section, click Save & Publish.



Communication Scenario CDS PRE

Check | Create Arrangement | Display Publishing Process | ···

YY1_PRE_API_DEP_00

Last Changed By: Pascal Renet
Last Changed On: 12/01/2023
Exported: No
Allowed Instances
One Instance per Scenario and Communication System

Active Scenario Status: Published

Editing Status: Draft

Inbound Services (1) | Outbound Services (0) | Authorizations (0) | Communication Arrangements (2)

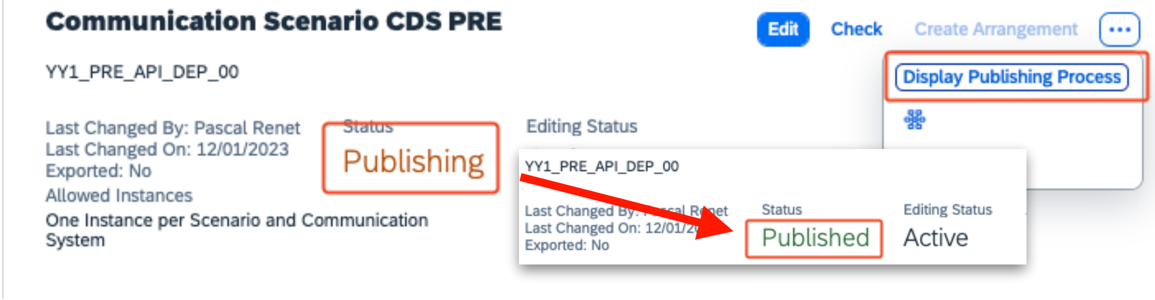
Inbound Services (1)

Search | Add | Remove

□	Inbound ID	Description	Status	Service Type	Last Changed On
□	YY1_PRE_API_00_CDS Last Changed By: SAP_SYSTEM	Deprecation API Sales CDS - 00		OData V2	11/24/2023

Save & Publish | Cancel | Revoke

You then have to wait for the publishing to finish. You can monitor the publishing by selecting the ‘Display Publishing Process’ or wait for the Status to change to Published.



Communication Scenario CDS PRE

Edit | Check | Create Arrangement | ···

Display Publishing Process

YY1_PRE_API_DEP_00

Last Changed By: Pascal Renet
Last Changed On: 12/01/2023
Exported: No
Allowed Instances
One Instance per Scenario and Communication System

Status: Publishing

Editing Status

YY1_PRE_API_DEP_00

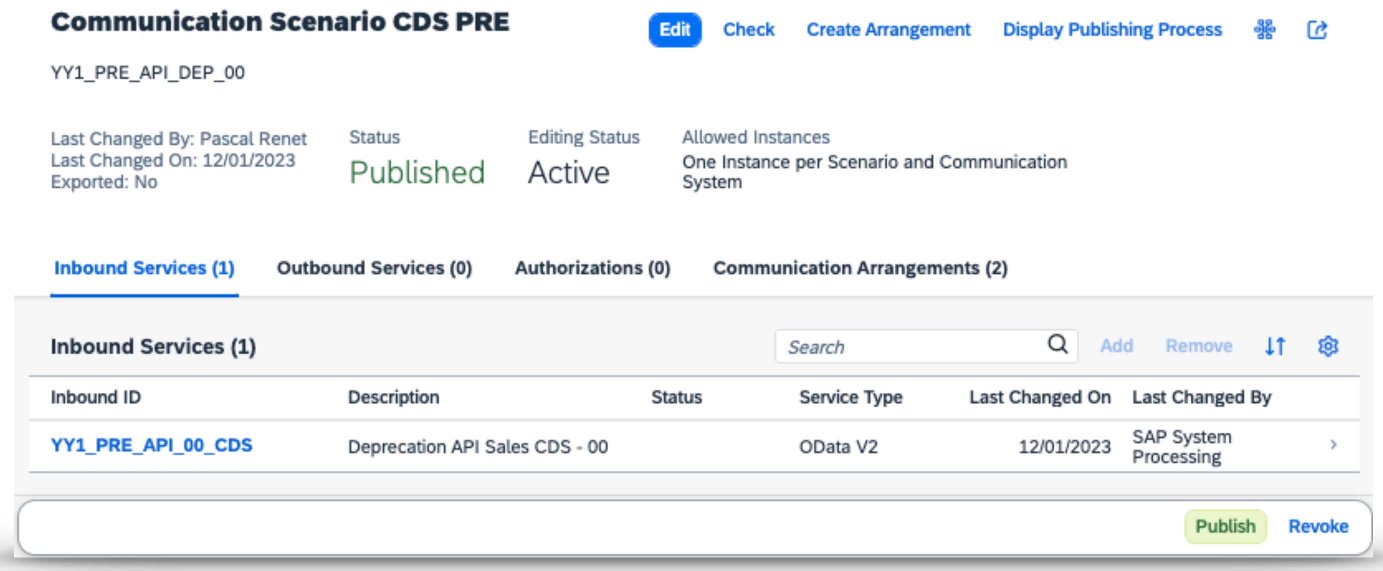
Last Changed By: Pascal Renet
Last Changed On: 12/01/2
Exported: No

Status: Published

Editing Status: Active

Step 4 - Test the Integration flow

Now that all the changes have been done on the SAP side and our custom communication scenario is published, it's the moment of truth!



Communication Scenario CDS PRE

YY1_PRE_API_DEP_00

Last Changed By: Pascal Renet
Last Changed On: 12/01/2023
Exported: No

Status: Published

Editing Status: Active

Allowed Instances: One Instance per Scenario and Communication System

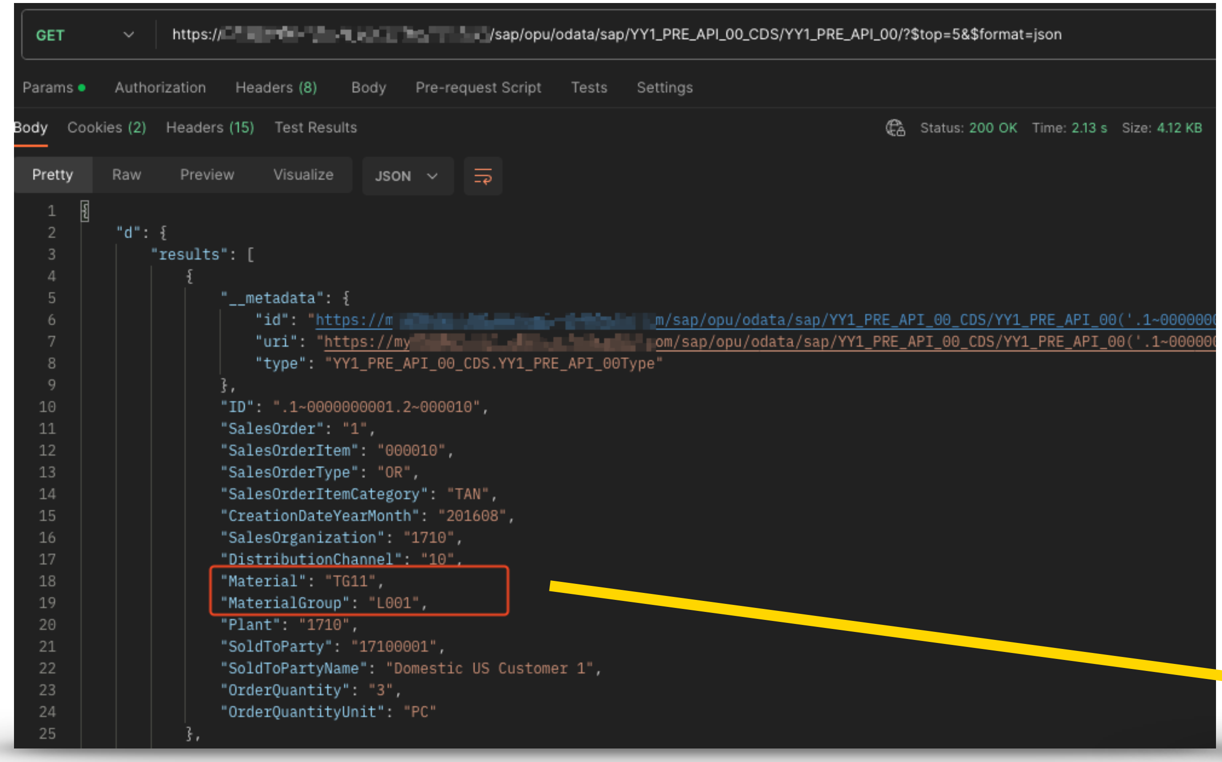
Inbound Services (1)

Inbound ID	Description	Status	Service Type	Last Changed On	Last Changed By
YY1_PRE_API_00_CDS	Deprecation API Sales CDS - 00		OData V2	12/01/2023	SAP System Processing

Let's once again test the APIs and check what the payloads look like. For this we go back to our REST client, and we test the GET operation on our API. Note that the URL has not changed.

First off, we'll do a before (left) and after (right) comparison of our json payload. Whilst we observe that the two successor fields we added have been pushed to the end of the payload, we can see that the content is identical from a field name and content point of view.

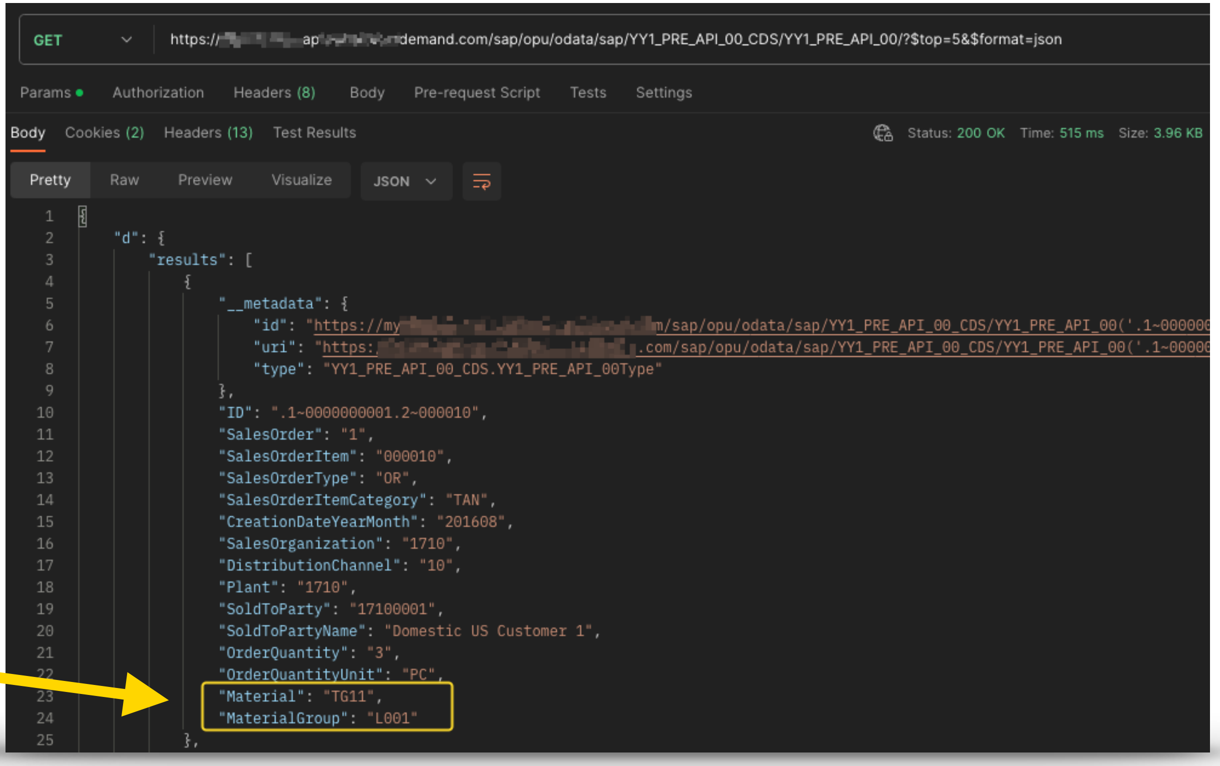
The positioning of the successor fields at the end of the API, is because when we added the successor fields to the CDS we did not re-position them - we left them at the end of the Elements list. In the next section we will show you how this can be avoided - if you so wish.



GET https://[redacted]/sap/opu/odata/sap/YY1_PRE_API_00_CDS/YY1_PRE_API_00/?$top=5&$format=json

Status: 200 OK Time: 2.13 s Size: 4.12 KB

```
{
    "d": {
        "results": [
            {
                "__metadata": {
                    "id": "https://m[redacted]m/sap/opu/odata/sap/YY1_PRE_API_00_CDS/YY1_PRE_API_00('.1~000000
                    "uri": "https://my[redacted]om/sap/opu/odata/sap/YY1_PRE_API_00_CDS/YY1_PRE_API_00('.1~000000
                    "type": "YY1_PRE_API_00_CDS.YY1_PRE_API_00Type"
                },
                "ID": ".1~0000000001.2~000010",
                "SalesOrder": "1",
                "SalesOrderItem": "000010",
                "SalesOrderType": "OR",
                "SalesOrderItemCategory": "TAN",
                "CreationDateYearMonth": "201608",
                "SalesOrganization": "1710",
                "DistributionChannel": "10",
                "Material": "TG11",
                "MaterialGroup": "L001",
                "Plant": "1710",
                "SoldToParty": "17100001",
                "SoldToPartyName": "Domestic US Customer 1",
                "OrderQuantity": "3",
                "OrderQuantityUnit": "PC"
            },
```

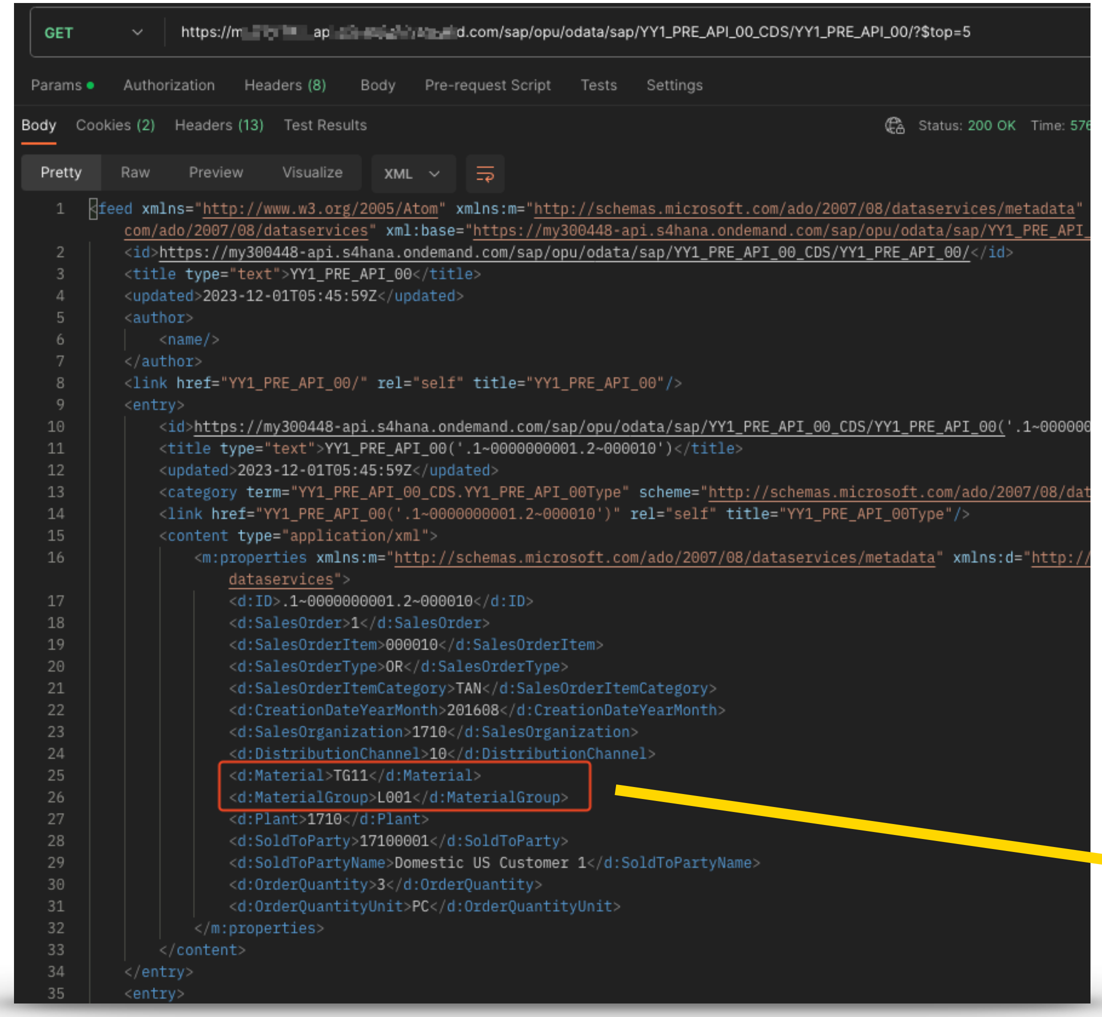


GET https://[redacted]ap[redacted]demand.com/sap/opu/odata/sap/YY1_PRE_API_00_CDS/YY1_PRE_API_00/?$top=5&$format=json

Status: 200 OK Time: 515 ms Size: 3.96 KB

```
{
    "d": {
        "results": [
            {
                "__metadata": {
                    "id": "https://my[redacted]m/sap/opu/odata/sap/YY1_PRE_API_00_CDS/YY1_PRE_API_00('.1~000000
                    "uri": "https:[redacted].com/sap/opu/odata/sap/YY1_PRE_API_00_CDS/YY1_PRE_API_00('.1~00000
                    "type": "YY1_PRE_API_00_CDS.YY1_PRE_API_00Type"
                },
                "ID": ".1~0000000001.2~000010",
                "SalesOrder": "1",
                "SalesOrderItem": "000010",
                "SalesOrderType": "OR",
                "SalesOrderItemCategory": "TAN",
                "CreationDateYearMonth": "201608",
                "SalesOrganization": "1710",
                "DistributionChannel": "10",
                "Plant": "1710",
                "SoldToParty": "17100001",
                "SoldToPartyName": "Domestic US Customer 1",
                "OrderQuantity": "3",
                "OrderQuantityUnit": "PC",
                "Material": "TG11",
                "MaterialGroup": "L001"
            },
```

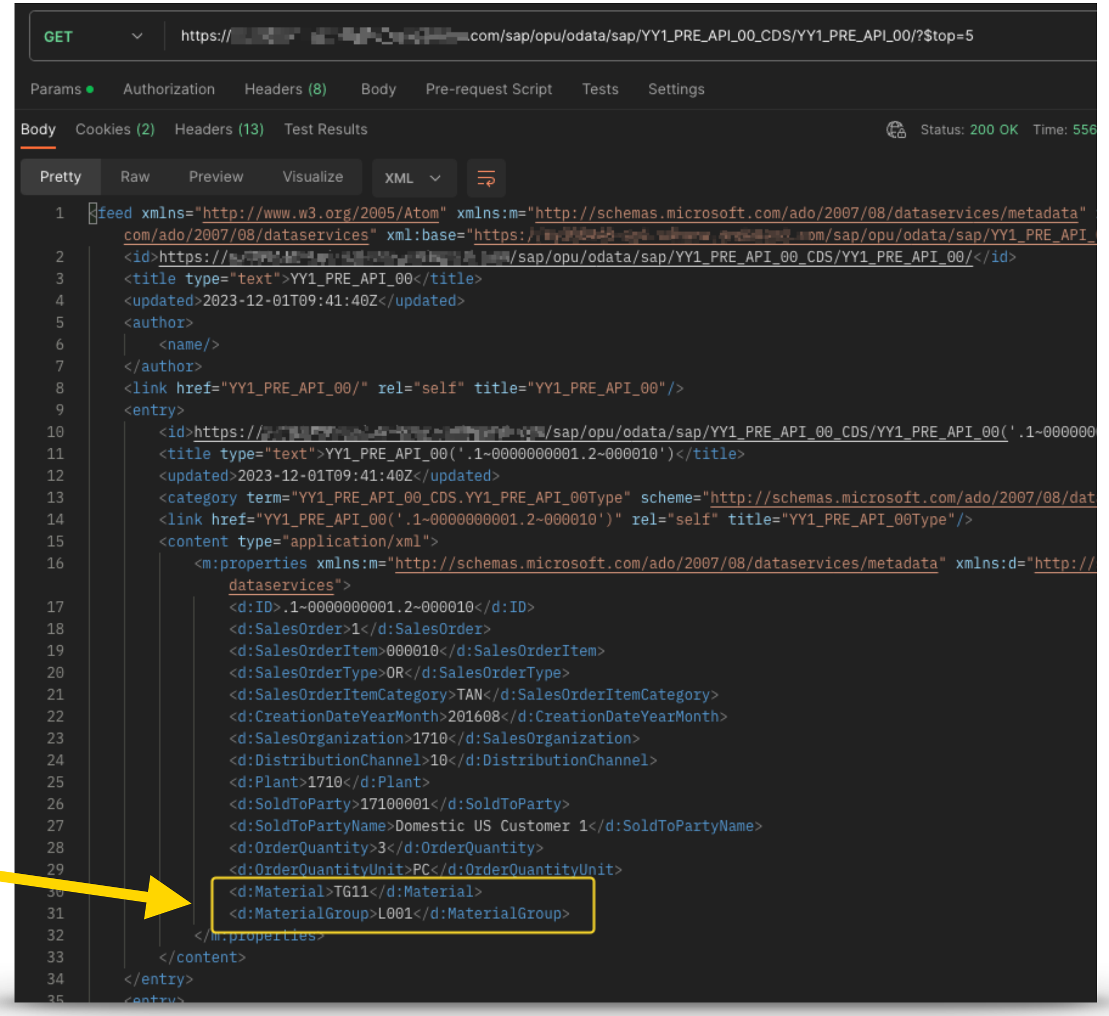
Then, we'll do a before (left) and after (right) comparison of our xml payload. Just like the json payload, whilst we observe that the two successor fields we added have been pushed to the end of the payload, we can see that the content is identical from a field name and content point of view.



GET https://m[redacted]ap[redacted]d.com/sap/opu/odata/sap/YY1_PRE_API_00_CDS/YY1_PRE_API_00/?$top=5

Status: 200 OK Time: 576

```
<feed xmlns="http://www.w3.org/2005/Atom" xmlns:m="http://schemas.microsoft.com/ado/2007/08/dataservices/metadata"
    com/ado/2007/08/dataservices" xml:base="https://my300448-api.s4hana.ondemand.com/sap/opu/odata/sap/YY1_PRE_API_
    <id>https://my300448-api.s4hana.ondemand.com/sap/opu/odata/sap/YY1_PRE_API_00_CDS/YY1_PRE_API_00/</id>
    <title type="text">YY1_PRE_API_00</title>
    <updated>2023-12-01T05:45:59Z</updated>
    <author>
        <name/>
    </author>
    <link href="YY1_PRE_API_00/" rel="self" title="YY1_PRE_API_00"/>
    <entry>
        <id>https://my300448-api.s4hana.ondemand.com/sap/opu/odata/sap/YY1_PRE_API_00_CDS/YY1_PRE_API_00('.1~000000
        <title type="text">YY1_PRE_API_00('.1~0000000001.2~000010')</title>
        <updated>2023-12-01T05:45:59Z</updated>
        <category term="YY1_PRE_API_00_CDS.YY1_PRE_API_00Type" scheme="http://schemas.microsoft.com/ado/2007/08/dat
        <link href="YY1_PRE_API_00('.1~0000000001.2~000010')" rel="self" title="YY1_PRE_API_00Type"/>
        <content type="application/xml">
            <m:properties xmlns:m="http://schemas.microsoft.com/ado/2007/08/dataservices/metadata" xmlns:d="http://
                dataservices">
                <d:ID>.1~0000000001.2~000010</d:ID>
                <d:SalesOrder>1</d:SalesOrder>
                <d:SalesOrderItem>000010</d:SalesOrderItem>
                <d:SalesOrderType>OR</d:SalesOrderType>
                <d:SalesOrderItemCategory>TAN</d:SalesOrderItemCategory>
                <d:CreationDateYearMonth>201608</d:CreationDateYearMonth>
                <d:SalesOrganization>1710</d:SalesOrganization>
                <d:DistributionChannel>10</d:DistributionChannel>
                <d:Material>TG11</d:Material>
                <d:MaterialGroup>L001</d:MaterialGroup>
                <d:Plant>1710</d:Plant>
                <d:SoldToParty>17100001</d:SoldToParty>
                <d:SoldToPartyName>Domestic US Customer 1</d:SoldToPartyName>
                <d:OrderQuantity>3</d:OrderQuantity>
                <d:OrderQuantityUnit>PC</d:OrderQuantityUnit>
            </m:properties>
        </content>
    </entry>
    <entry>
```



GET https://[redacted].com/sap/opu/odata/sap/YY1_PRE_API_00_CDS/YY1_PRE_API_00/?$top=5

Status: 200 OK Time: 556

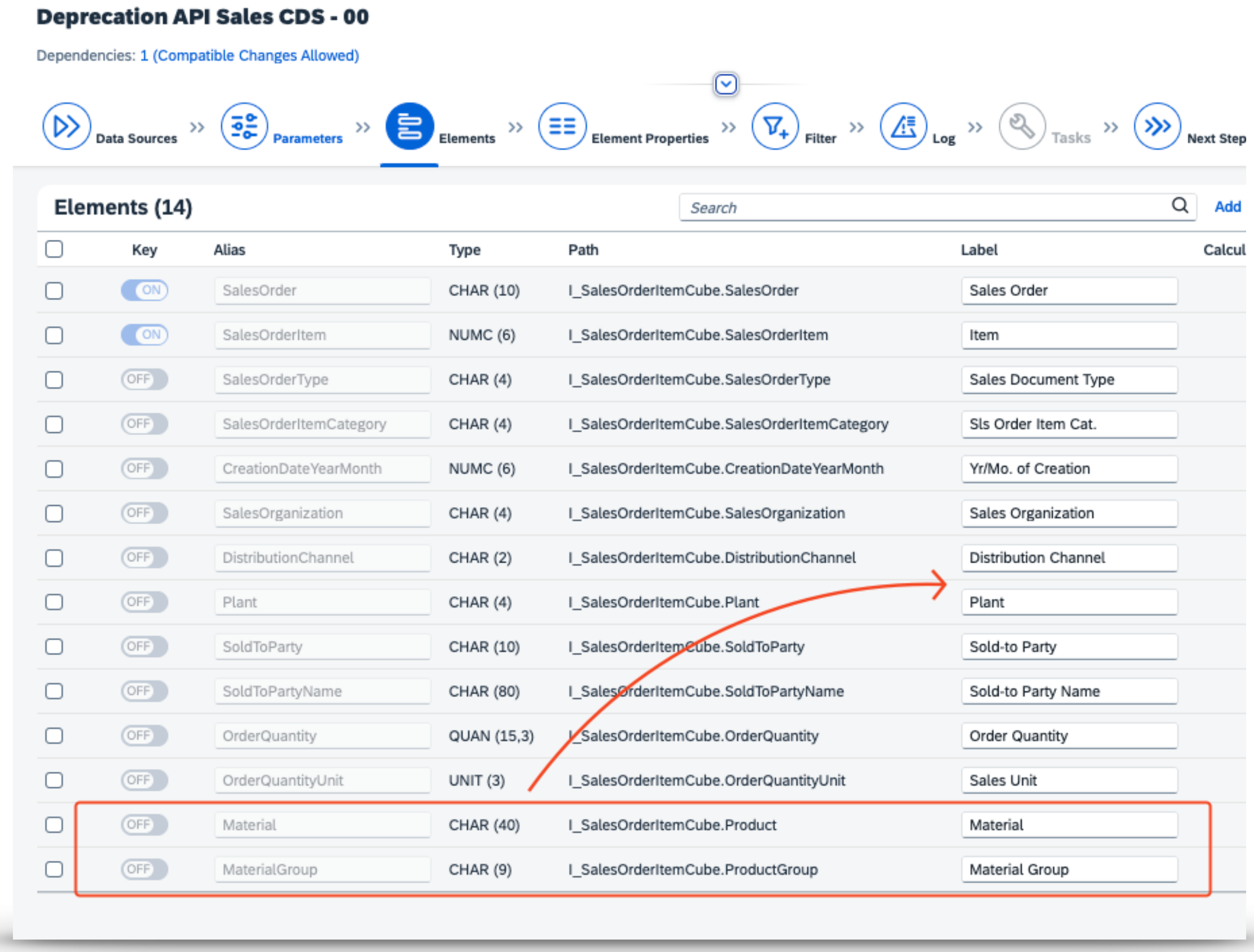
```
<feed xmlns="http://www.w3.org/2005/Atom" xmlns:m="http://schemas.microsoft.com/ado/2007/08/dataservices/metadata"
    com/ado/2007/08/dataservices" xml:base="https:/[redacted]om/sap/opu/odata/sap/YY1_PRE_API_
    <id>https://[redacted]/sap/opu/odata/sap/YY1_PRE_API_00_CDS/YY1_PRE_API_00/</id>
    <title type="text">YY1_PRE_API_00</title>
    <updated>2023-12-01T09:41:40Z</updated>
    <author>
        <name/>
    </author>
    <link href="YY1_PRE_API_00/" rel="self" title="YY1_PRE_API_00"/>
    <entry>
        <id>https://[redacted]/sap/opu/odata/sap/YY1_PRE_API_00_CDS/YY1_PRE_API_00('.1~000000
        <title type="text">YY1_PRE_API_00('.1~0000000001.2~000010')</title>
        <updated>2023-12-01T09:41:40Z</updated>
        <category term="YY1_PRE_API_00_CDS.YY1_PRE_API_00Type" scheme="http://schemas.microsoft.com/ado/2007/08/dat
        <link href="YY1_PRE_API_00('.1~0000000001.2~000010')" rel="self" title="YY1_PRE_API_00Type"/>
        <content type="application/xml">
            <m:properties xmlns:m="http://schemas.microsoft.com/ado/2007/08/dataservices/metadata" xmlns:d="http://
                dataservices">
                <d:ID>.1~0000000001.2~000010</d:ID>
                <d:SalesOrder>1</d:SalesOrder>
                <d:SalesOrderItem>000010</d:SalesOrderItem>
                <d:SalesOrderType>OR</d:SalesOrderType>
                <d:SalesOrderItemCategory>TAN</d:SalesOrderItemCategory>
                <d:CreationDateYearMonth>201608</d:CreationDateYearMonth>
                <d:SalesOrganization>1710</d:SalesOrganization>
                <d:DistributionChannel>10</d:DistributionChannel>
                <d:Plant>1710</d:Plant>
                <d:SoldToParty>17100001</d:SoldToParty>
                <d:SoldToPartyName>Domestic US Customer 1</d:SoldToPartyName>
                <d:OrderQuantity>3</d:OrderQuantity>
                <d:OrderQuantityUnit>PC</d:OrderQuantityUnit>
                <d:Material>TG11</d:Material>
                <d:MaterialGroup>L001</d:MaterialGroup>
            </m:properties>
        </content>
    </entry>
    <entry>
```

Whilst the order of the fields may have changed, I would not expect this to be an issue from an integration point of view. I.e the calling application is not looking for the first, second or nth field in the payload, but rather an element included between a tag, e.g `<tag>`. The net result is that I had to not have to do any kind of changes in my middleware or in the calling application as the message payload has not changed - we did not adopt the successor field names. Of course you would still want to test the integration before rolling out the changes productively, but that should be a formality.

Amending the order of the field names

As we have previously noted, when we added the successor fields to the custom CDS, we just let the successor fields be added at the end of the elements list. This explains why the successor fields changed position and ended up at the end of the json and xml payloads. However, know that if this should be a problem, you can move the elements in the custom CDS and position where you want them to be (in the place of the deprecated fields for example). To do this, we go back to the custom CDS app (you have to be in Edit mode).

We can see our successor fields at the bottom of the list, and the arrow, showing where we want them to be (below distribution channel).



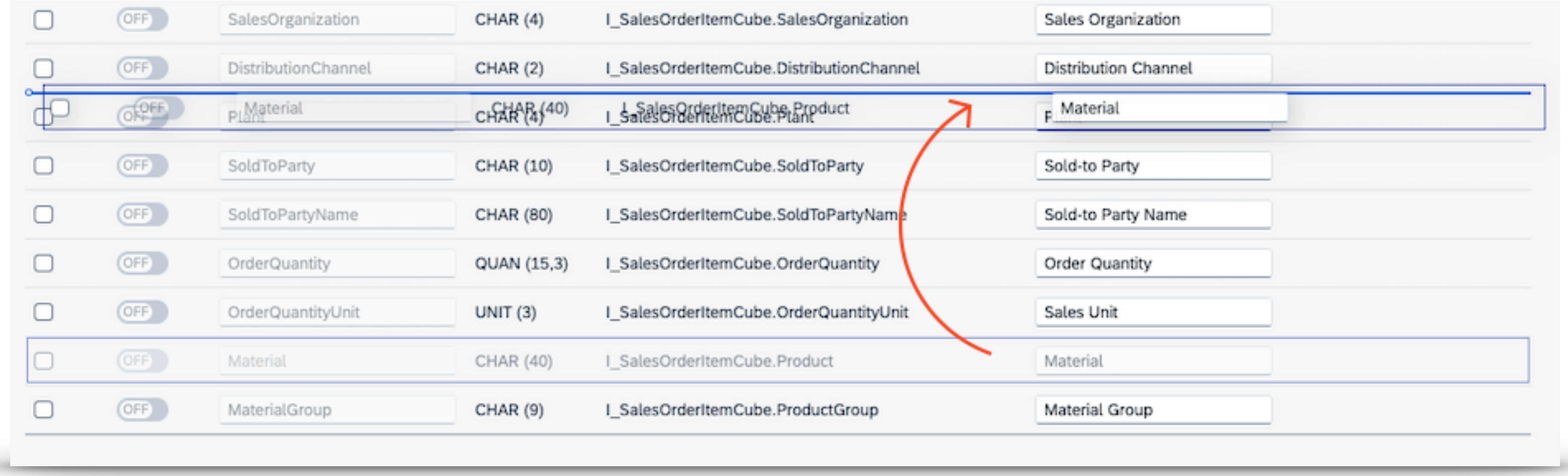
Deprecation API Sales CDS - 00

Dependencies: 1 (Compatible Changes Allowed)

Elements (14)

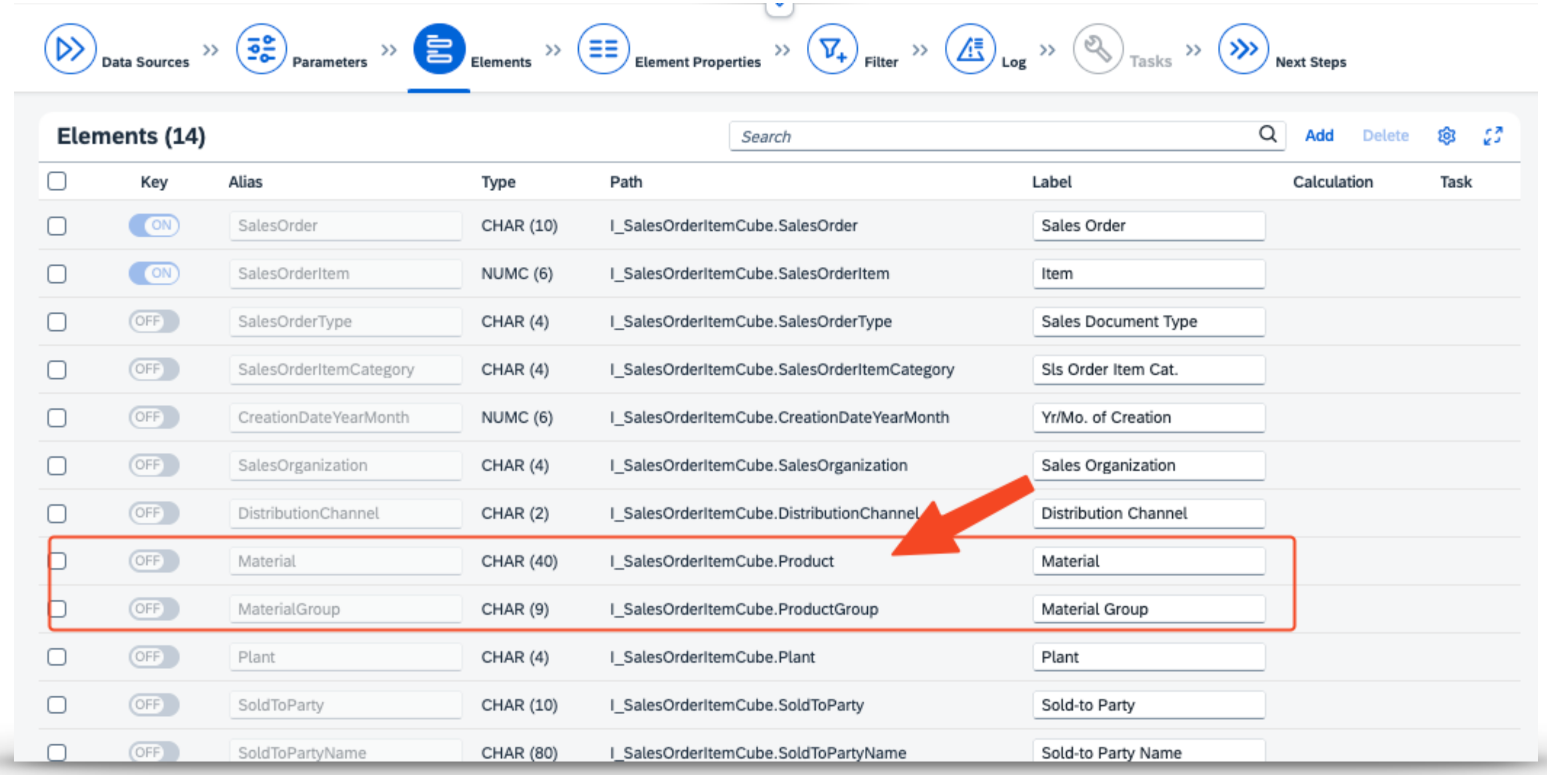
☐	Key	Alias	Type	Path	Label	Calcul
☐	ON	SalesOrder	CHAR (10)	I_SalesOrderItemCube.SalesOrder	Sales Order	
☐	ON	SalesOrderItem	NUMC (6)	I_SalesOrderItemCube.SalesOrderItem	Item	
☐	OFF	SalesOrderType	CHAR (4)	I_SalesOrderItemCube.SalesOrderType	Sales Document Type	
☐	OFF	SalesOrderItemCategory	CHAR (4)	I_SalesOrderItemCube.SalesOrderItemCategory	Sls Order Item Cat.	
☐	OFF	CreationDateYearMonth	NUMC (6)	I_SalesOrderItemCube.CreationDateYearMonth	Yr/Mo. of Creation	
☐	OFF	SalesOrganization	CHAR (4)	I_SalesOrderItemCube.SalesOrganization	Sales Organization	
☐	OFF	DistributionChannel	CHAR (2)	I_SalesOrderItemCube.DistributionChannel	Distribution Channel	
☐	OFF	Plant	CHAR (4)	I_SalesOrderItemCube.Plant	Plant	
☐	OFF	SoldToParty	CHAR (10)	I_SalesOrderItemCube.SoldToParty	Sold-to Party	
☐	OFF	SoldToPartyName	CHAR (80)	I_SalesOrderItemCube.SoldToPartyName	Sold-to Party Name	
☐	OFF	OrderQuantity	QUAN (15,3)	I_SalesOrderItemCube.OrderQuantity	Order Quantity	
☐	OFF	OrderQuantityUnit	UNIT (3)	I_SalesOrderItemCube.OrderQuantityUnit	Sales Unit	
☐	OFF	Material	CHAR (40)	I_SalesOrderItemCube.Product	Material	
☐	OFF	MaterialGroup	CHAR (9)	I_SalesOrderItemCube.ProductGroup	Material Group	

As we hover over the field we want to move, a 'hand' icon will appear. We simply need to click to select it, then drag it to where we want it to be.



□	OFF	SalesOrganization	CHAR (4)	I_SalesOrderItemCube.SalesOrganization	Sales Organization
□	OFF	DistributionChannel	CHAR (2)	I_SalesOrderItemCube.DistributionChannel	Distribution Channel
□	OFF	Material	CHAR (40)	I_SalesOrderItemCube.Product	Material
□	OFF	Plant	CHAR (4)	I_SalesOrderItemCube.Plant	P
□	OFF	SoldToParty	CHAR (10)	I_SalesOrderItemCube.SoldToParty	Sold-to Party
□	OFF	SoldToPartyName	CHAR (80)	I_SalesOrderItemCube.SoldToPartyName	Sold-to Party Name
□	OFF	OrderQuantity	QUAN (15,3)	I_SalesOrderItemCube.OrderQuantity	Order Quantity
□	OFF	OrderQuantityUnit	UNIT (3)	I_SalesOrderItemCube.OrderQuantityUnit	Sales Unit
□	OFF	Material	CHAR (40)	I_SalesOrderItemCube.Product	Material
□	OFF	MaterialGroup	CHAR (9)	I_SalesOrderItemCube.ProductGroup	Material Group

We repeat this for all the fields we want to move.

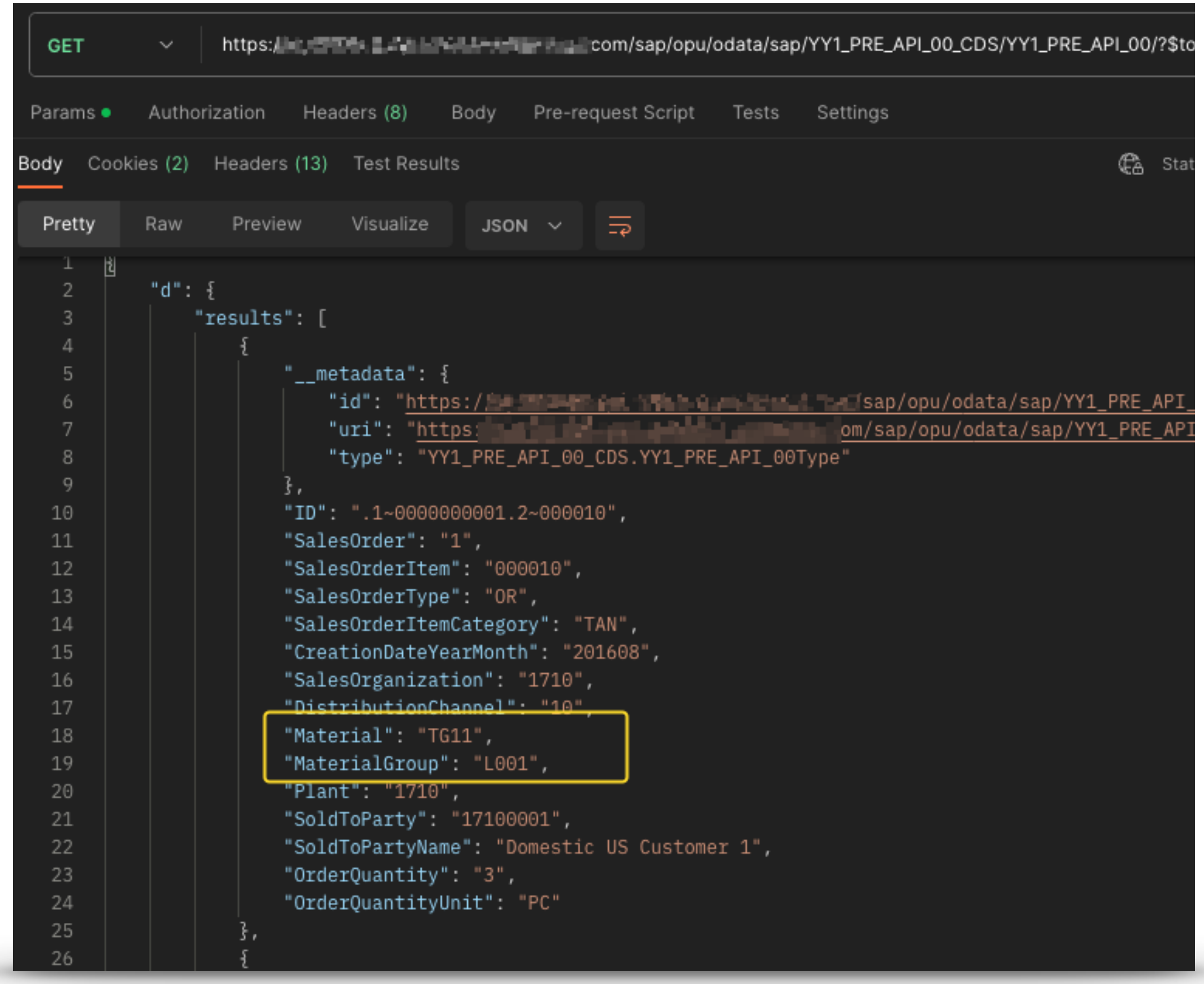


☐	Key	Alias	Type	Path	Label	Calculation	Task
☐	ON	SalesOrder	CHAR (10)	I_SalesOrderItemCube.SalesOrder	Sales Order		
☐	ON	SalesOrderItem	NUMC (6)	I_SalesOrderItemCube.SalesOrderItem	Item		
☐	OFF	SalesOrderType	CHAR (4)	I_SalesOrderItemCube.SalesOrderType	Sales Document Type		
☐	OFF	SalesOrderItemCategory	CHAR (4)	I_SalesOrderItemCube.SalesOrderItemCategory	Sls Order Item Cat.		
☐	OFF	CreationDateYearMonth	NUMC (6)	I_SalesOrderItemCube.CreationDateYearMonth	Yr/Mo. of Creation		
☐	OFF	SalesOrganization	CHAR (4)	I_SalesOrderItemCube.SalesOrganization	Sales Organization		
☐	OFF	DistributionChannel	CHAR (2)	I_SalesOrderItemCube.DistributionChannel	Distribution Channel		
☐	OFF	Material	CHAR (40)	I_SalesOrderItemCube.Product	Material		
☐	OFF	MaterialGroup	CHAR (9)	I_SalesOrderItemCube.ProductGroup	Material Group		
☐	OFF	Plant	CHAR (4)	I_SalesOrderItemCube.Plant	Plant		
☐	OFF	SoldToParty	CHAR (10)	I_SalesOrderItemCube.SoldToParty	Sold-to Party		
☐	OFF	SoldToPartyName	CHAR (80)	I_SalesOrderItemCube.SoldToPartyName	Sold-to Party Name		

We can then see that our fields `Product` and `ProductGroup` have been re-positioned below the `Distribution Channel`. We of course check and publish the changes, and then head back to our REST client to check the effect of our changes.

We execute a GET operation on the same, usual API endpoint, and we see that the changing of the field order in the custom CDS has been replicated as desired in the resulting API payload.

The payload is at this point identical to what it was before we made any changes to any objects in SAP S/4HANA Cloud and we have not made any changes to our integration middleware or calling applications.



https:/[redacted]com/sap/opu/odata/sap/YY1_PRE_API_00_CDS/YY1_PRE_API_00/?$to

```
{
    "d": {
        "results": [
            {
                "__metadata": {
                    "id": "https:/[redacted]sap/opu/odata/sap/YY1_PRE_API_
                    "uri": "https:[redacted]om/sap/opu/odata/sap/YY1_PRE_API
                    "type": "YY1_PRE_API_00_CDS.YY1_PRE_API_00Type"
                },
                "ID": ".1~0000000001.2~000010",
                "SalesOrder": "1",
                "SalesOrderItem": "000010",
                "SalesOrderType": "OR",
                "SalesOrderItemCategory": "TAN",
                "CreationDateYearMonth": "201608",
                "SalesOrganization": "1710",
                "DistributionChannel": "10",
                "Material": "TG11",
                "MaterialGroup": "L001",
                "Plant": "1710",
                "SoldToParty": "17100001",
                "SoldToPartyName": "Domestic US Customer 1",
                "OrderQuantity": "3",
                "OrderQuantityUnit": "PC"
            },
            {
```

Wrap-up

If you have made it this far, Thank You! I hope you got something out of this document and that it has helped you to understand deprecations a little better, and maybe learnt one or two things along the way that you will be able to apply during the next upgrade.

Before you go though (don't worry, I won't be asking for a contribution to my onlyfans account), I would be immensely grateful if you could leave a constructive criticism as a comment here, they will help to motivate and improve future editions.

Managing Deprecations in SAP S/4HANA Cloud

PUBLIC EDITION