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## What you will learn: Overview

Day 2 of 5. Topics covered :

SAP event driven architecture artifacts visualized using the Event Portal

- Explore the Event Portal and learn how to import objects.
- Learn how to create a design so that your events can be mapped and understood.

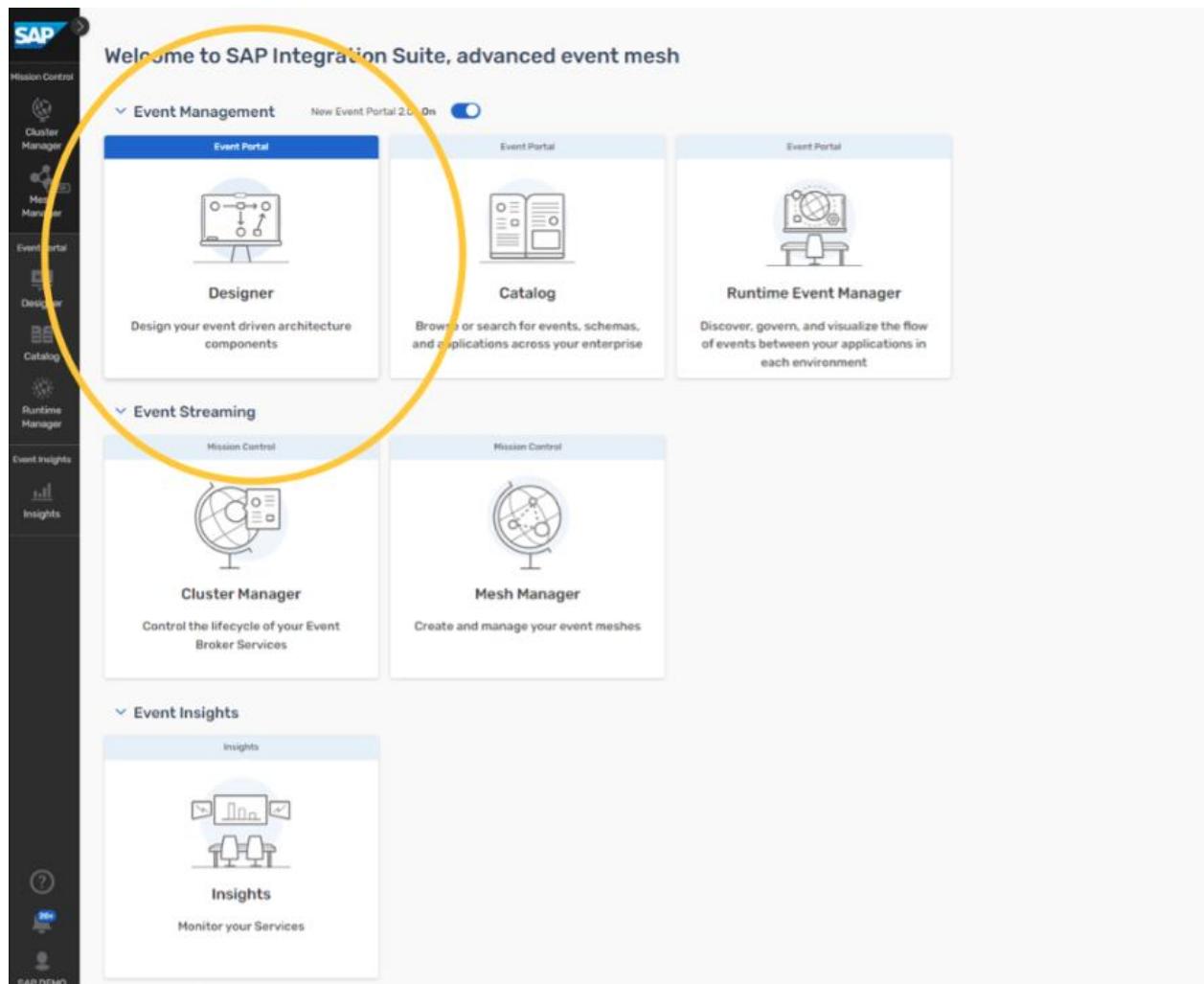
## Prerequisites

Complete all activities in day#1. You access and use the same broker you setup previously as well as the simulator push events.

## AEM Portal Setup

In this task, you will be importing the design representing the events for this rapid evaluation. This design is an example, and not a full implementation. The intent is to have enough design for an evaluation while allowing easy understanding of the concepts being demonstrated. The level of detail in the model is "medium size," meaning that there are enough attributes to enable the demonstration, but it is not the full schema for the SAP objects involved.

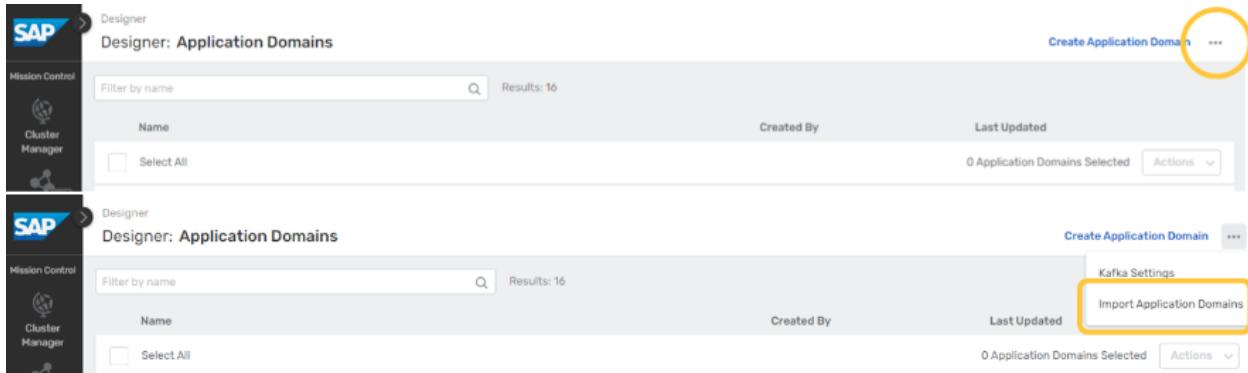
1. From the SAP AEM Console, open the Cluster Manager.



## RPP Day 2

2. Import the demo domain from the provided export file.

Pull down the menu extension in the Application Domains view and select the import function.



The image contains two screenshots of the SAP BTP Application Domains interface. Both screenshots show a list of application domains with columns for Name, Created By, and Last Updated. A search bar at the top shows 'Results: 16'. In the top screenshot, the 'Create Application Domain' button in the top right corner is circled in yellow. In the bottom screenshot, the 'Import Application Domains' button in the top right corner is also circled in yellow.

Download [btp\\_aem\\_demo.json](#) to your file system and import it:

### Importing Application Domain

The import may take several minutes.

After the import is complete, you will see the evaluation domain in the domains list.

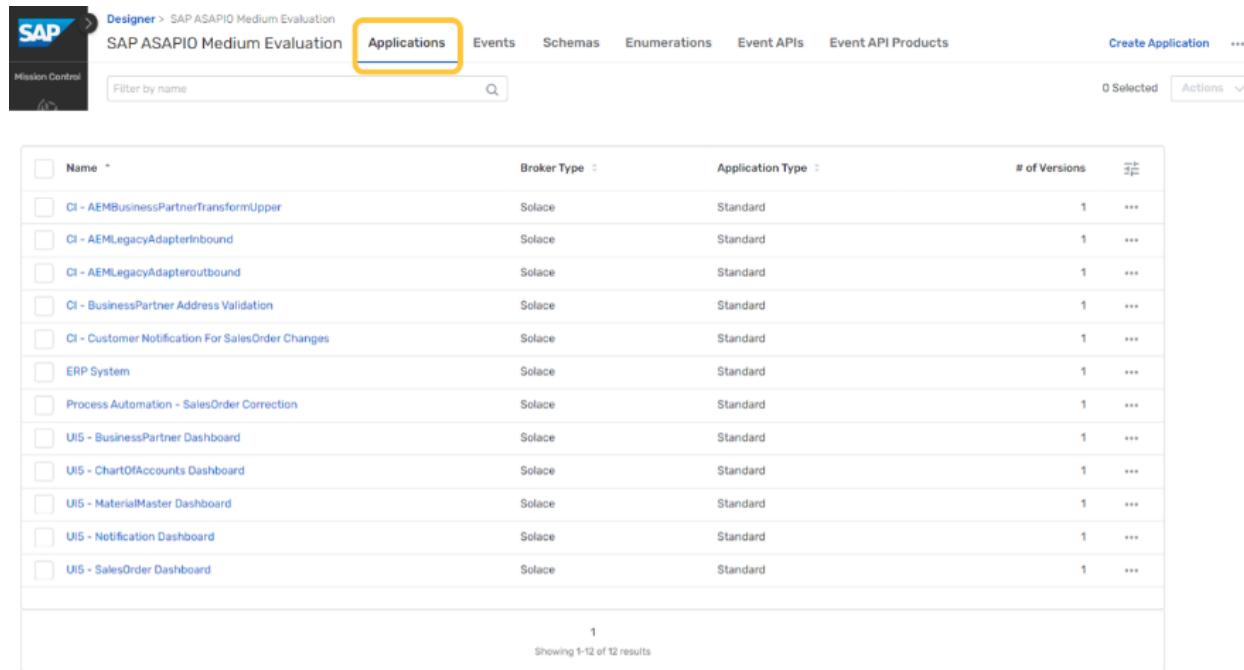


The image shows a list of application domains. One domain, 'BTP AEM Demo', is highlighted with a yellow box. To its left is a checkbox. To its right are the names 'Karl Ossoinig', '3 months ago', and three vertical dots for more options.

3. Take a quick tour of the domain model.

The initial view of the domain will be of the Applications tab.

You will see several modeled applications in the list related to the demo.



The screenshot shows the SAP ASAPIO Medium Evaluation Designer interface. The top navigation bar includes 'Designer > SAP ASAPIO Medium Evaluation' and tabs for 'Applications', 'Events', 'Schemas', 'Enumerations', 'Event APIs', and 'Event API Products'. A yellow box highlights the 'Applications' tab. Below the tabs is a search bar labeled 'Filter by name' with a magnifying glass icon. To the right, there are buttons for 'Create Application' and 'Actions'. Underneath the tabs is a table with columns: 'Name', 'Broker Type', 'Application Type', '# of Versions', and a small icon. The table lists 12 applications, all of which are Solace brokers and Standard application types. The applications listed are: CI - AEMBusinessPartnerTransformUpper, CI - AEMLegacyAdapterInbound, CI - AEMLegacyAdapteroutbound, CI - BusinessPartner Address Validation, CI - Customer Notification For SalesOrder Changes, ERP System, Process Automation - SalesOrder Correction, UI5 - BusinessPartner Dashboard, UI5 - ChartOfAccounts Dashboard, UI5 - MaterialMaster Dashboard, UI5 - Notification Dashboard, and UI5 - SalesOrder Dashboard. All applications have 1 version and are marked with three dots. At the bottom of the table, it says 'Showing 1-12 of 12 results'.

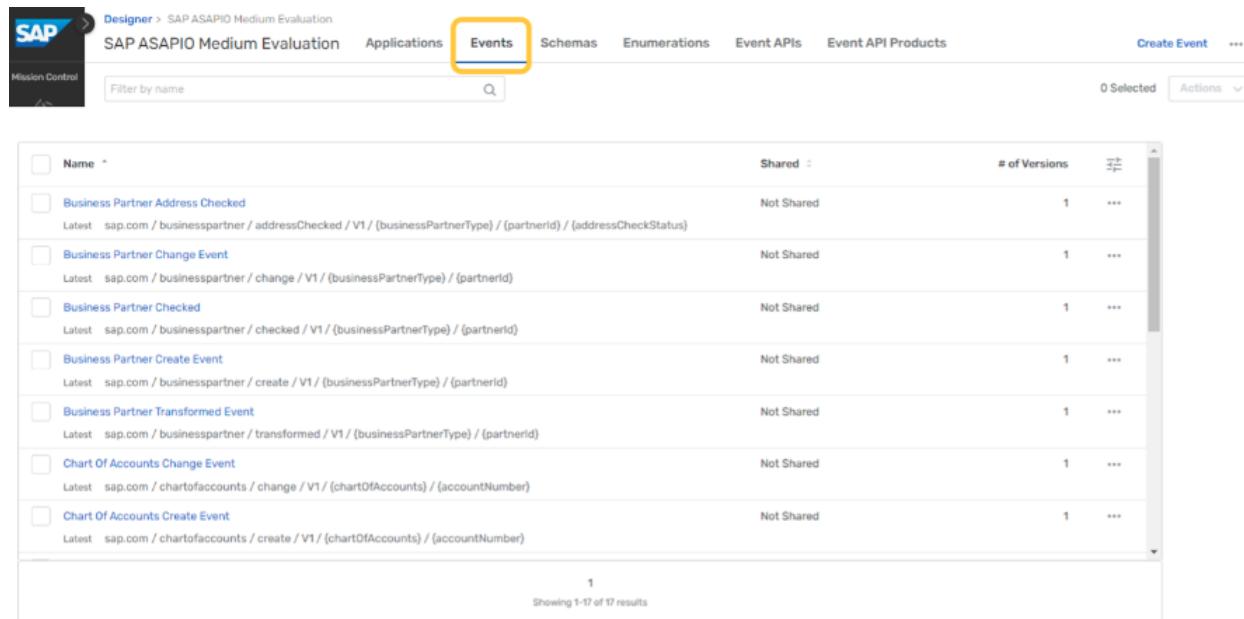
Name	Broker Type	Application Type	# of Versions	
CI - AEMBusinessPartnerTransformUpper	Solace	Standard	1	...
CI - AEMLegacyAdapterInbound	Solace	Standard	1	...
CI - AEMLegacyAdapteroutbound	Solace	Standard	1	...
CI - BusinessPartner Address Validation	Solace	Standard	1	...
CI - Customer Notification For SalesOrder Changes	Solace	Standard	1	...
ERP System	Solace	Standard	1	...
Process Automation - SalesOrder Correction	Solace	Standard	1	...
UI5 - BusinessPartner Dashboard	Solace	Standard	1	...
UI5 - ChartOfAccounts Dashboard	Solace	Standard	1	...
UI5 - MaterialMaster Dashboard	Solace	Standard	1	...
UI5 - Notification Dashboard	Solace	Standard	1	...
UI5 - SalesOrder Dashboard	Solace	Standard	1	...

Event APIs and Event API Products can be used to expose and manage AsyncAPI interfaces within organizations, or with external partners through your APIM vendor.

Note that Event APIs and Event API Products are advanced topics that will not be covered by this demonstration design.

## RPP Day 2

Clicking on the Events tab, you will see a listing of events defined for the domain.

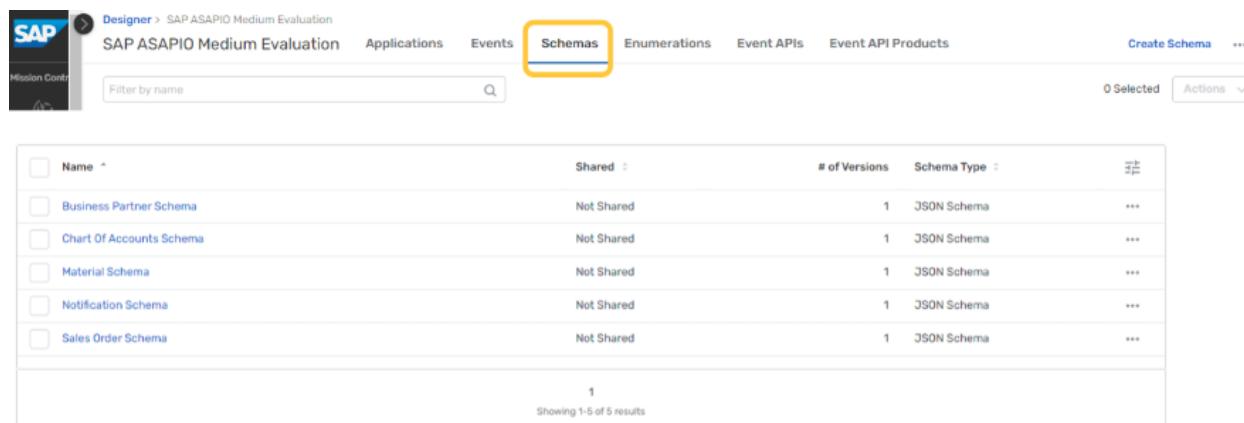


The screenshot shows the SAP ASAPIO Medium Evaluation Designer interface. The top navigation bar includes links for Designer, SAP ASAPIO Medium Evaluation, Applications, Events (which is highlighted with a yellow box), Schemas, Enumerations, Event APIs, Event API Products, Create Event, and more. A search bar labeled 'Filter by name' is present. Below the navigation is a table listing various events:

Name	Shared	# of Versions	Actions
Business Partner Address Checked	Not Shared	1	...
Business Partner Change Event	Not Shared	1	...
Business Partner Checked	Not Shared	1	...
Business Partner Create Event	Not Shared	1	...
Business Partner Transformed Event	Not Shared	1	...
Chart Of Accounts Change Event	Not Shared	1	...
Chart Of Accounts Create Event	Not Shared	1	...

At the bottom of the table, it says 'Showing 1-17 of 17 results'.

Clicking on the Schemas tab, you will see 5 schemas.

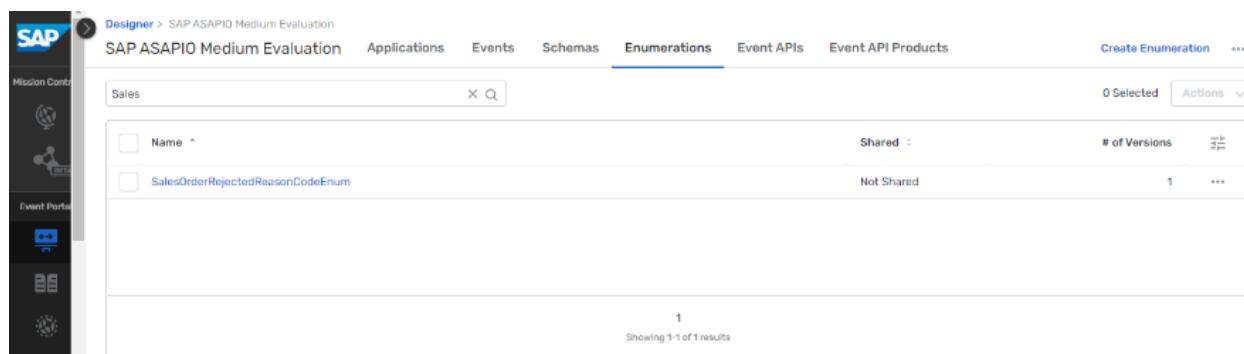


The screenshot shows the SAP ASAPIO Medium Evaluation Designer interface with the Schemas tab highlighted (yellow box). The top navigation bar includes Designer, SAP ASAPIO Medium Evaluation, Applications, Events, Schemas (highlighted), Enumerations, Event APIs, Event API Products, Create Schema, and more. A search bar labeled 'Filter by name' is present. Below the navigation is a table listing five schemas:

Name	Shared	# of Versions	Schema Type	Actions
Business Partner Schema	Not Shared	1	JSON Schema	...
Chart Of Accounts Schema	Not Shared	1	JSON Schema	...
Material Schema	Not Shared	1	JSON Schema	...
Notification Schema	Not Shared	1	JSON Schema	...
Sales Order Schema	Not Shared	1	JSON Schema	...

At the bottom of the table, it says 'Showing 1-5 of 5 results'.

For simplicity, we have defined one schema for use by all events dealing with each object.  
Clicking on the Enumerations tab, you will see one enum.



The screenshot shows the SAP ASAPIO Medium Evaluation Designer interface with the Enumerations tab highlighted (yellow box). The top navigation bar includes Designer, SAP ASAPIO Medium Evaluation, Applications, Events, Schemas, Enumerations (highlighted), Event APIs, Event API Products, Create Enumeration, and more. A search bar labeled 'Sales' is present. Below the navigation is a table listing one enumeration:

Name	Shared	# of Versions	Actions
SalesOrderRejectedReasonCodeEnum	Not Shared	1	...

At the bottom of the table, it says 'Showing 1-1 of 1 results'.

Enums are used in the model to show a finite set of possible values.

For example, this one is defined to hold a concise set of rejected reason code values for sales orders. Moving back to the Events tab, we can use the search box near the top to filter down to the event(s) we want to find. For example, typing "Sales" here results in a live search that filters the list down to just Sales Order related events.

Name	Shared	# of Versions	Actions
Sales Order Address Checked Event	Not Shared	1	...
Sales Order Change Event	Not Shared	1	...
Sales Order Create Event	Not Shared	1	...
Sales Order Retry Event	Not Shared	1	...
SalesOrderRejected Event	Not Shared	1	...

Clicking on the Sales Order Create event in this view will drill into the definition of that event.

Name	Shared	# of Versions	Actions
Sales Order Address Checked Event	Not Shared	1	...
Sales Order Change Event	Not Shared	1	...
<b>Sales Order Create Event</b>	Not Shared	1	...
Sales Order Retry Event	Not Shared	1	...
SalesOrderRejected Event	Not Shared	1	...

This provides an overview of the event details including the version, state, description, topic address, schema reference, and reference-by links.

Designer > SAP ASAPIO Medium Evaluation > Sales Order Create Event

Sales Order Create Event

Event Details: Not Shared

Event Version Details

Version 1.0.0 (Draft) Change State

Version Name None

Description A SalesOrderCreated event occurs when a new sales order has been created in the ERP system.

Broker Type Solace

Topic Address sap.com / salesorder / create / V1 / {salesOrg} / {distributionChannel} / {division} / {customerId}

Schema Details

Schema Sales Order Schema 1.0.0 (Draft)

Referenced By Applications (1 Sub, 1 Pub) Event APIs (0 Sub, 0 Pub)

Last Updated on 2023-10-09 07:58:54 by Karl Ossoling  
Created on 2023-10-09 07:58:54 by Karl Ossoling

Close

### Version & State:

Designer can be used to manage the version and state of model objects and tracks their relationships for you, enabling full SDLC (software development lifecycle) visibility. It also serves as a collaboration space that allows you to leverage events you create more effectively to derive new value for the business.

### Broker Type & Topic Address:

For AEM services (broker type = Solace), the topic address is a string with "/" separators that enables dynamic routing and filtering. Following best practice guidelines for creating topic strings is critical to your EDA success.

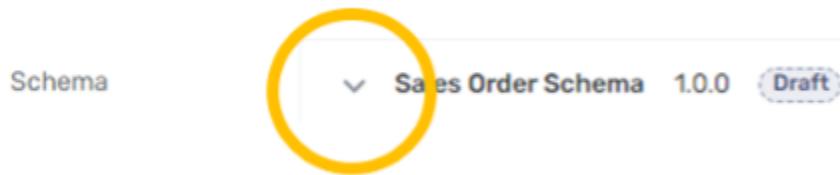
The general format is **ORG/DOMAIN/VERB/VERSION/{ATTRIBUTE1}/{ATTRIBUTE2}/...**

Topics are a powerful mechanism employed by AEM to perform dynamic routing in an event mesh, moving copies of events only where they are needed. It also enables consuming clients to filter events within topics using subscriptions and wildcard characters (\*, >).

This capability avoids client applications having to implement brittle, complex filtering logic to reject unwanted events.

Next, click on the referenced schema to expand your view.

#### Schema Details



The referenced schema can be displayed as content in this view.

Now click on the expanded menu in this section and select Open Schema.

The screenshot shows the same "Schema Details" view as before, but with a yellow box highlighting the "Open Schema" button in the expanded menu on the right side of the header. The expanded menu also includes other options like "...".

Below the header, there's a "Content" section containing a JSON code block:

```
1 {  
2   "$id": "https://sap.com/SalesOrderV1.schema.json",  
3   "$schema": "https://json-schema.org/draft/2020-12/schema",  
4   "title": "SalesOrderV1",  
5   "type": "object",  
6   "properties": {  
7     "orderHeader": {  
8       "type": "array",  
9       "items": [  
10         {  
11           "type": "object",  
12           "properties": {  
13             "salesOrderNumber": {  
14               "type": "string"  
15             }  
16           }  
17         }  
18       ]  
19     }  
20   }  
21 }
```

This takes you directly to the Schema tab content. Here, you can see a more detailed description and have control to edit, create a version, and adjust the state of the schema.

The description includes links to references used to define the objects in the demonstration.

If you click on the expander, you can view just the schema text in a larger view without opening it for editing.

## RPP Day 2

Designer > SAP ASAPIO Medium Evaluation > Sales Order Schema

Sales Order Schema

> Schema Details: Not Shared

Edit Schema Details

Versions (1) Edit This Version ...

v1(1)

1.0.0 Draft ...

Schema Version Details

Version: 1.0.0 Draft Change State

Version Name: None

Description: Data Structure  
A sales order object in SAP has a large number of data elements - Here are a few examples:  
OCRMPCATHDR = Prod. catalog number OBBP\_POITEM = Item Number in Order Document OCRMPPAVSCHW = Material Availability Date (Requested)  
This sample implementation is for demonstration purpose only, and does not implement the full object with all attributes.  
The full list can be found at  
[https://help.sap.com/saphelp\\_scm700\\_ehp02/helpdata/en/4d/aecd595deb1c36e1000000a42189b/content.htm?no\\_cache=true](https://help.sap.com/saphelp_scm700_ehp02/helpdata/en/4d/aecd595deb1c36e1000000a42189b/content.htm?no_cache=true)  
Background  
The sales order business object (object type BUS2032 ) is a request from a customer to a company asking for a specific quantity of materials to be delivered, or services to be rendered, on a given date.  
A sales order is sent to a sales area, and this sales area is then responsible for fulfilling the contract.  
[https://help.sap.com/docs/SAP\\_S4HANA\\_ON-PREMISE/0f18dddf28764f5fb07ecd8d0549044cc/6422b753128eb44ce1000000a174cb4.html](https://help.sap.com/docs/SAP_S4HANA_ON-PREMISE/0f18dddf28764f5fb07ecd8d0549044cc/6422b753128eb44ce1000000a174cb4.html)

Content

```
1  $id: "https://sap.com/SalesOrderV1.schema.json",
2  $schema: "https://json-schema.org/draft/2020-12/schema",
3  title: "SalesOrderV1",
4  type: "object",
5  properties: {
6    "orderHeader": {
7      type: "array",
8      items: [
9        {
10          type: "object",
11          properties: {
12            "salesOrderNumber": {
13              type: "string"
14            }
15          }
16        }
17      ]
18    }
19  }
20 }
```

A yellow circle highlights the copy icon in the top right corner of the code editor.

The Designer tool will be a useful way to explore the demonstration data throughout your evaluation.

4. Practice using the Catalog. The Catalog is an important collaboration feature that allows you to quickly find objects across domains. Let's use this tool to find the Sales Order events

again. From the SAP AEM Console, open the Catalog:

The screenshot shows the SAP Integration Suite interface with a yellow circle highlighting the 'Catalog' tab under the 'Event Management' section. The 'Catalog' tab is part of the 'Event Portal' section, which also includes 'Designer' and 'Runtime Event Manager'. Other sections like 'Event Streaming' and 'Event Insights' are also visible.

After clicking on the Events tab, enter "Sales Order" into the search box:

The screenshot shows the SAP Catalog interface. The 'Events' tab is selected and highlighted with a yellow box. A search bar below it contains the text 'Sales Order', which is also highlighted with a yellow box. Other tabs include 'Catalog', 'Applications', 'Schemas', 'Enumerations', 'Event APIs', and 'Event API Products'.

You will see the filtering of the live search as you type. Next, get more specific and "Create" to the search string. This will narrow your results to Sales Order related events:

Name	Shared	Application Domain	Subscribing Applications	Publishing Applications	# of Versions
Sales Order Create Event Latest sap.com / salesorder / create / V1 / {salesOrg} / {distributionChannel} / {division} / {customerId}	Not Shared	SAP ASAPIO Medium Evaluation	1	1	1 matched   1 ...

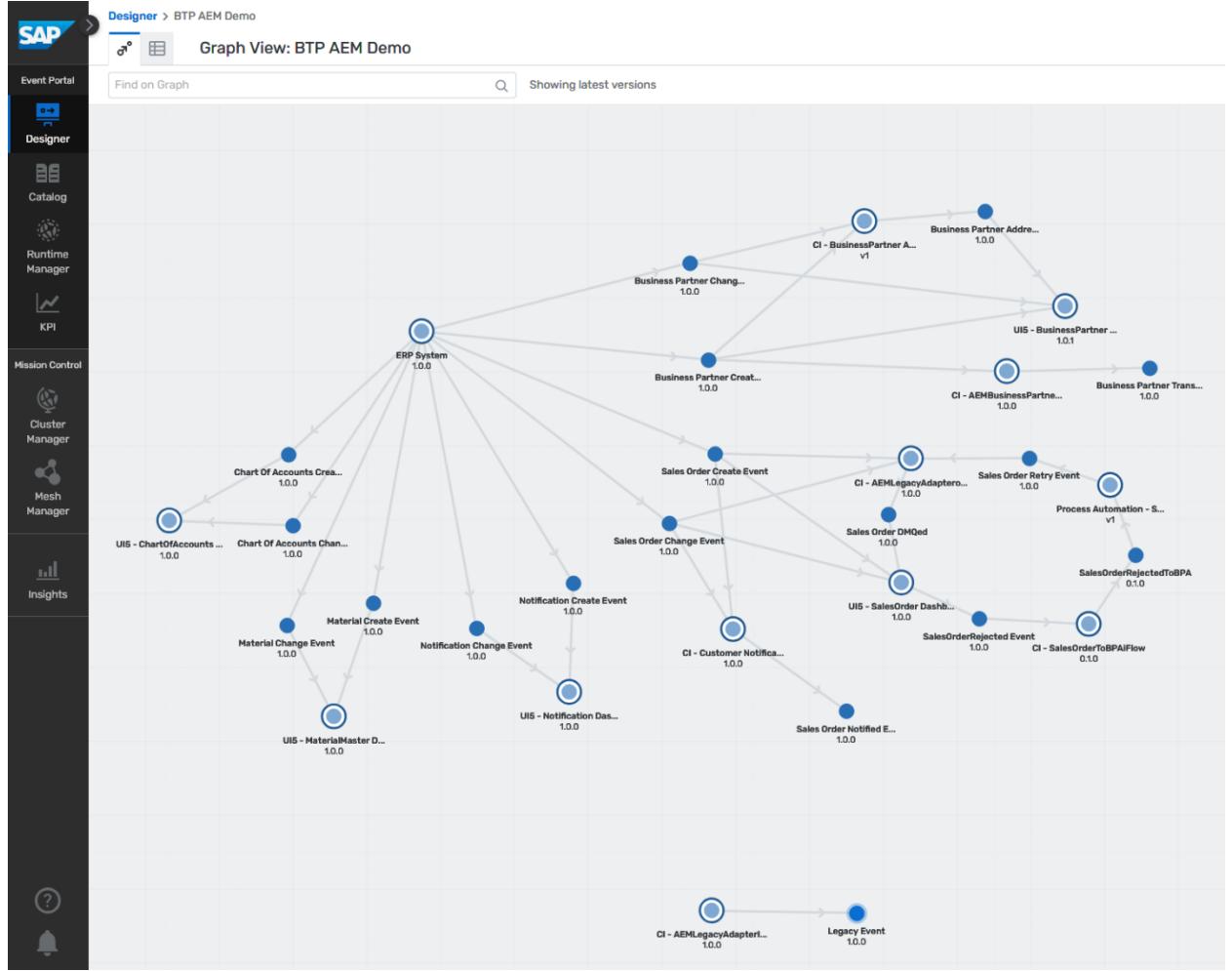
Finally, click on the filter icon next to the search box to see how results can be filtered:

The screenshot shows the SAP Catalog interface with the 'Events' tab selected. At the top, there is a search bar with a magnifying glass icon and a filter icon (a funnel) highlighted with a yellow box. Below the search bar are sections for 'Filters', 'Application Domains', 'States', and 'Shared'. On the right, there is a 'Add Filters' button.

5. Visualize your imported design by looking at the graph view:

The screenshot shows the SAP Designer interface with the 'Components' tab selected. The left sidebar shows navigation options like Event Portal, Designer (highlighted with a yellow box), Catalog, Runtime Manager, KPI, Mission Control, Cluster Manager, Mesh Manager, and Insights. The main area displays a list of components, each with a checkbox and a name. The names listed are: CI - AEMBusinessPartnerTransformUpper, CI - AEMLegacyAdapterInbound, CI - AEMLegacyAdapteroutbound, CI - BusinessPartner Address Validation, CI - Customer Notification For SalesOrder Changes, CI - SalesOrderToBPApiFlow, ERP System, Process Automation - SalesOrder Correction, UI5 - BusinessPartner Dashboard, UI5 - ChartOfAccounts Dashboard, UI5 - MaterialMaster Dashboard, UI5 - Notification Dashboard, and UI5 - SalesOrder Dashboard.

6. The graph view in designer shows a graphical representation of your event-driven design. The applications are connected to one another with flow lines through the events which they are exchanging. This provides an overview of the interactions being modeled by the design. You can use the view controls to zoom, center and change visualization settings:



## Takeaways

- Import objects into the Event portal
- Explored the Event portal
  
- Viewed the artifacts relevant to the business examples being used in the workshop
- Easy reuse of existing events

