

RPP Day 2

Rapid Pilot Program 2024

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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

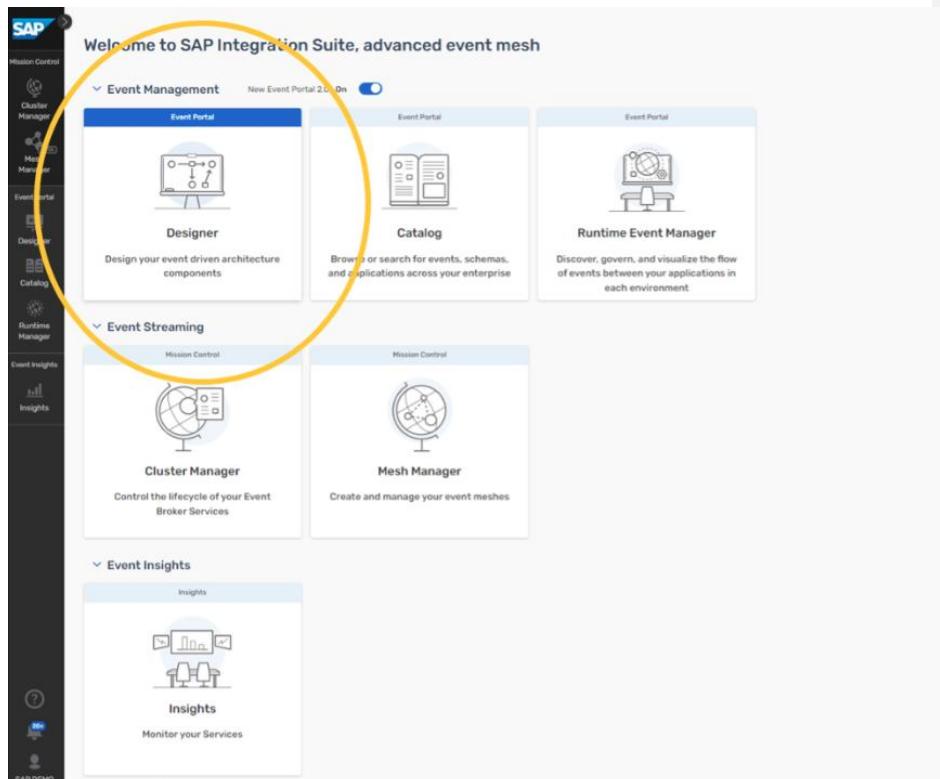
Complete all activities in day#1. You access and use the same broker you setup previously as well as the simulator push events.

## 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.

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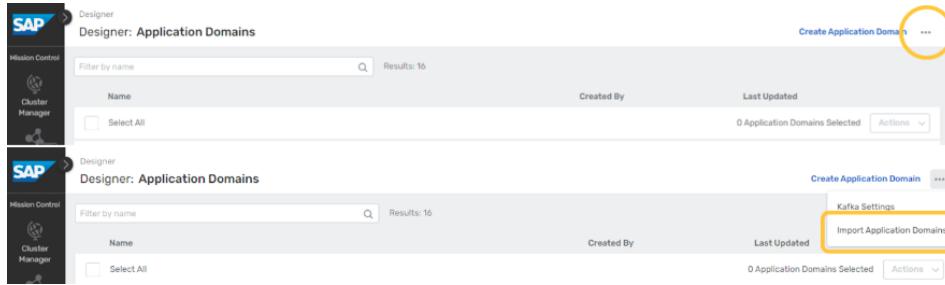
1. From the SAP AEM Console, open the Cluster Manager.



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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 Mission Control Designer interface. Both screenshots show the 'Designer: Application Domains' view. In the top screenshot, the 'Create Application Domain' button is highlighted with a yellow circle. In the bottom screenshot, the 'Import Application Domains' option under the 'Kafka Settings' dropdown is highlighted with a yellow circle.

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.

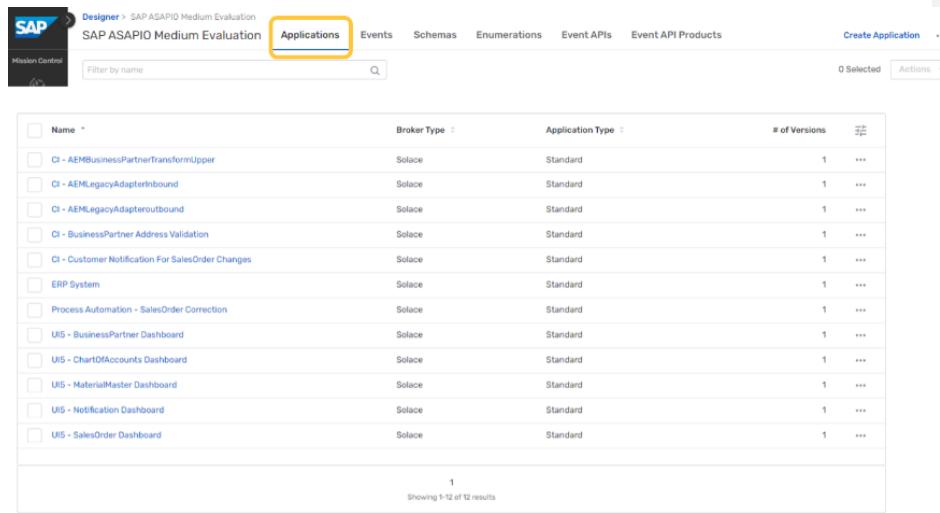


The image shows a list of application domains. One domain, 'BTP AEM Demo', is highlighted with a yellow box. The other domains listed are 'Karl Ossoinig' and '3 months ago'.

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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 'SAP ASAPIO Medium Evaluation'. The 'Applications' tab is highlighted with a yellow box. Other tabs include 'Events', 'Schemas', 'Enumerations', 'Event APIs', 'Event API Products', 'Create Application', and '...'. A search bar 'Filter by name' and a 'Actions' dropdown are also visible. The main content area displays a table of applications:

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 ***

1  
Showing 1-12 of 12 results

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.

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

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	...
		1	
Showing 1-17 of 17 results			

Clicking on the Schemas tab, you will see 5 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	...
		1		
Showing 1-5 of 5 results				

For simplicity, we have defined one schema for use by all events dealing with each object.

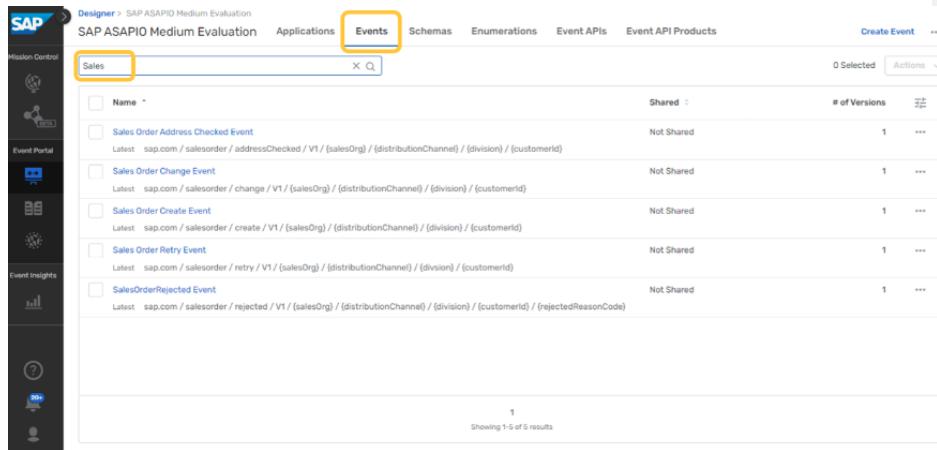
Clicking on the Enumerations tab, you will see one enum.

Name	Shared	# of Versions	Actions
SalesOrderRejectedReasonCodeEnum	Not Shared	1	...
		1	
Showing 1-1 of 1 results			

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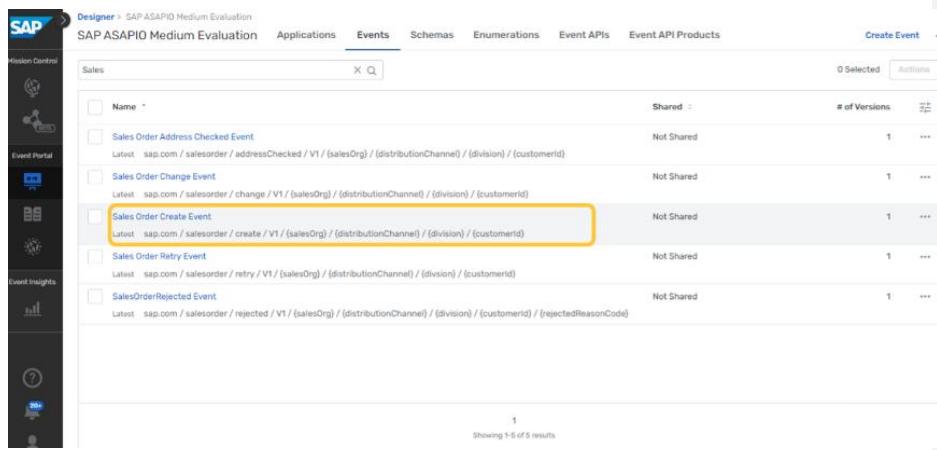
Enums are used in the model to show a finite set of possible values.

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.



The screenshot shows the SAP ASAPIO Medium Evaluation Designer interface. The top navigation bar includes tabs for Designer, Applications, Events (which is highlighted with a yellow box), Schemas, Enumerations, Event APIs, and Event API Products. Below the navigation is a search bar with the text 'Sales'. A table lists five events: Sales Order Address Checked Event, Sales Order Change Event, Sales Order Create Event, Sales Order Retry Event, and SalesOrderRejected Event. Each row includes a checkbox, the event name, its shared status (Not Shared), the number of versions (1), and three-dot options. The bottom of the table shows 'Showing 1-5 of 5 results'.

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



This screenshot is identical to the previous one, showing the SAP ASAPIO Medium Evaluation Designer interface with the Events tab selected. The search bar still contains 'Sales'. However, the 'Sales Order Create Event' row is now highlighted with a yellow box, indicating it has been selected. The other four events remain unselected.

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

The screenshot shows the SAP ASAPIO Medium Evaluation interface for the Sales Order Create Event. The main content area displays the following details:

- Versions (1)**:
  - v1 (1)
    - 1.0.0 (Draft)
- 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)
  - Sub Pub
  - > UI5 - SalesOrder Dashboard v1 (Draft)
- Last Updated on 2023-10-09 07:58:54 by Karl Osseling  
Created on 2023-10-09 07:58:54 by Karl Osseling

### 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}/...**

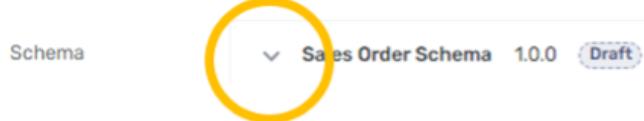
Topics are a powerful mechanism employed by AEM to perform dynamic routing in an event mesh, moving copies of events only where they are needed. It also enables consuming clients to filter events within topics using subscriptions and wildcard characters (\*, >).

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

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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.

A screenshot of the "Schema Details" view. On the right side, there is an expanded menu with three options: "...", "Open Schema", and another option partially visible. The "Open Schema" option is highlighted with a yellow box. Below the menu, there is a code editor window titled "Content" showing JSON schema code. The code includes lines 1 through 14, defining properties like "\$id", "\$schema", "title", "type", "properties", and "orderHeader".

```
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.

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The screenshot shows the SAP ASAP! Medium Evaluation Designer tool interface. The top navigation bar includes 'Designer', 'SAP ASAP! Medium Evaluation', and 'Sales Order Schema'. The main content area displays 'Schema Details: Not Shared' for a version named 'v1(1)'. The version is labeled '1.0.0 Draft'. The 'Edit Schema Details' button is visible at the top right. The 'Schema Version Details' section shows the version number and state. Below it, the 'Description' section contains a detailed text about sales orders, links to SAP help pages, and a 'Background' section. The 'Content' section displays a JSON schema definition with line numbers 1 through 14. A yellow circle highlights the copy icon (a clipboard with a plus sign) located to the right of the JSON code.

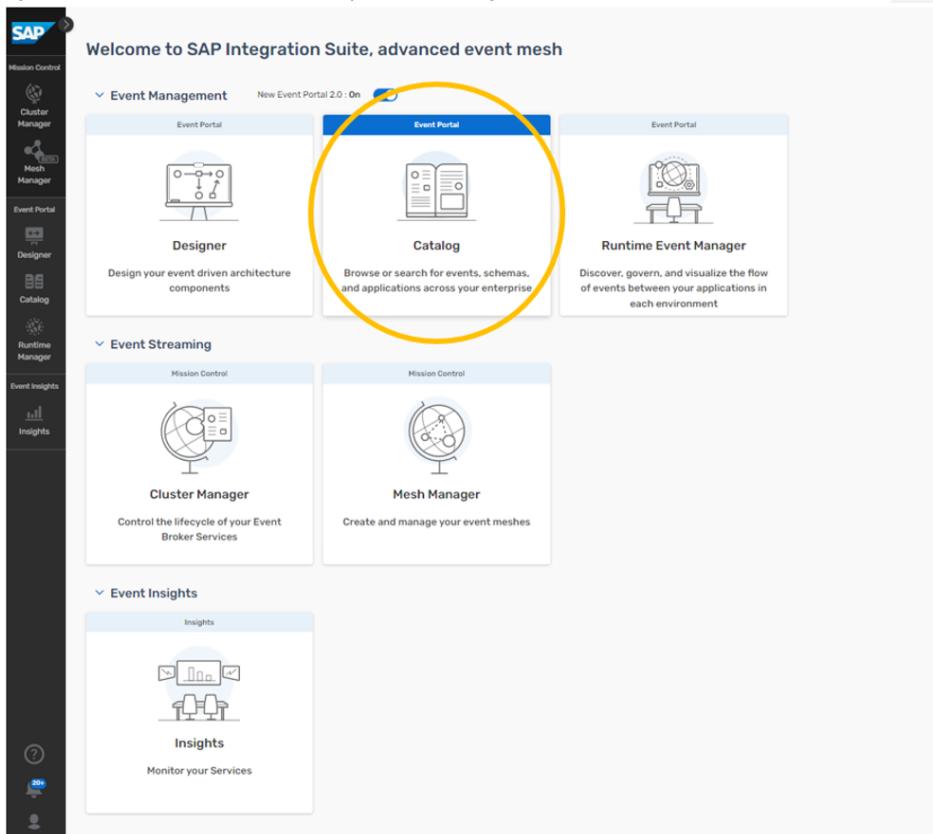
```
1 {
2   "$id": "https://sap.com/SalesOrderV1.schema.json",
3   "$schema": "https://json-schema.org/draft/2020-12/schema",
4   "title": "SalesOrderV1",
5   "type": "object",
6   "properties": {
7     "orderHeader": {
8       "type": "array",
9       "items": [
10         {
11           "type": "object",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

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

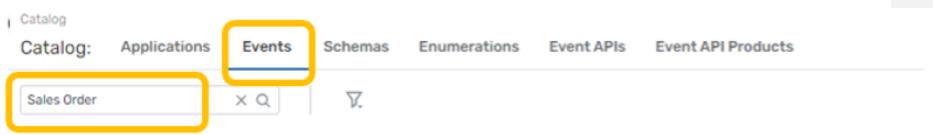
4. Practice using the Catalog. The Catalog is an important collaboration feature that allows you to quickly find objects across domains. Let's use this tool to find the Sales Order events

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



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



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	Not Shared	SAP ASAPIO Medium Evaluation Latest: sap.com / salesorder / create / V1 / {salesOrg} / {distributionChannel} / {division} / {customerId}	1	1	1 matched	...

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

Catalog  
Catalog: Applications Events Schemas Enumerations Event APIs Event API Products  
Search  

Filters  
Application Domains: No Filters States: No Filters Shared: No Filters Add Filters  
Modeled Event Meshes: No Filters

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

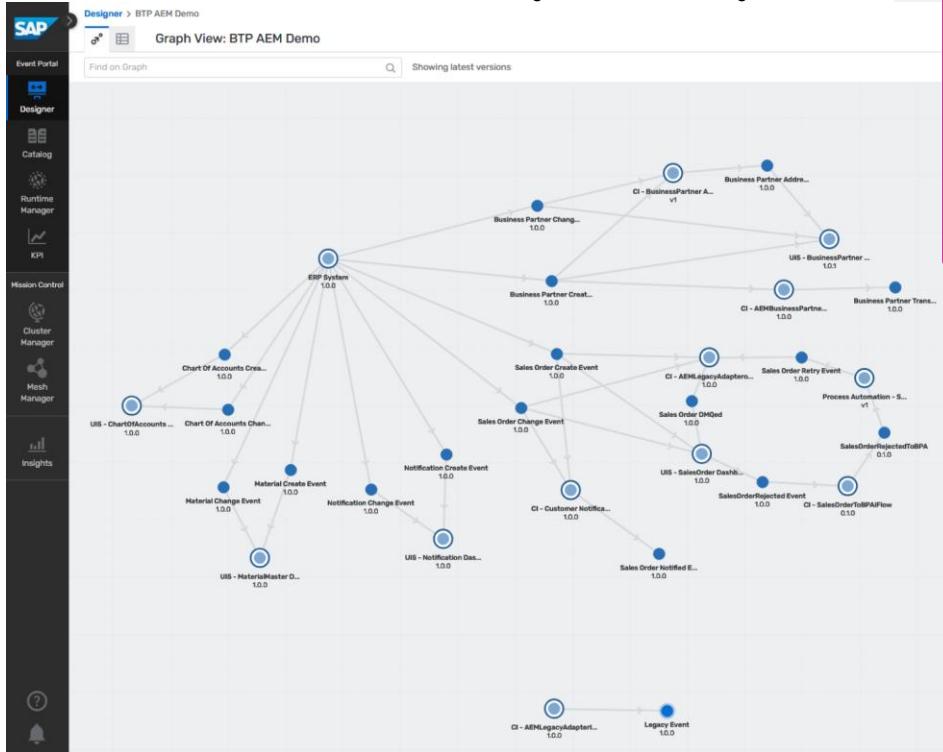
Designer > BTP AEM Demo  
Event Portal  
Designer Catalog Runtime Manager KPI Mission Control Cluster Manager Mesh Manager Insights  
Components: Applications Events Schemas Enumerations Event APIs Event API Products  
Filter by name  

<input type="checkbox"/> Name *
<a href="#">CI - AEMBusinessPartnerTransformUpper</a>
<a href="#">CI - AEMLegacyAdapterinbound</a>
<a href="#">CI - AEMLegacyAdapteroutbound</a>
<a href="#">CI - BusinessPartner Address Validation</a>
<a href="#">CI - Customer Notification For SalesOrder Changes</a>
<a href="#">CI - SalesOrderToBPAiFlow</a>
<a href="#">ERP System</a>
<a href="#">Process Automation - SalesOrder Correction</a>
<a href="#">UI5 - BusinessPartner Dashboard</a>
<a href="#">UI5 - ChartOfAccounts Dashboard</a>
<a href="#">UI5 - MaterialMaster Dashboard</a>
<a href="#">UI5 - Notification Dashboard</a>
<a href="#">UI5 - SalesOrder Dashboard</a>

**Commented [JA1]:** The whole screen looks different now in AEM

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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:



**Commented [CH2R1]:** Agreed, up to here our EP module seems still mostly in sync with EP. But from here things have changed significantly enough to make our instructions confusing and impossible to follow.

The whole purpose of deploying the applications to a runtime was to get the visualisation that is now also available (again) in EP designer.

I think we should just remove the whole deployment section for the next RPP and instruct people to look at the visualisation in designer.

We can then re-invent this module when we develop RPP v2 which will include things like config-push.

@Scott Dillon @Sumeet Koshal @Vidyadhar Kotekar

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## 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

