

Contents

What you will learn: Overview.....	1
Prerequisites	1
AEM Portal Setup	1
Takeaways	17

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.

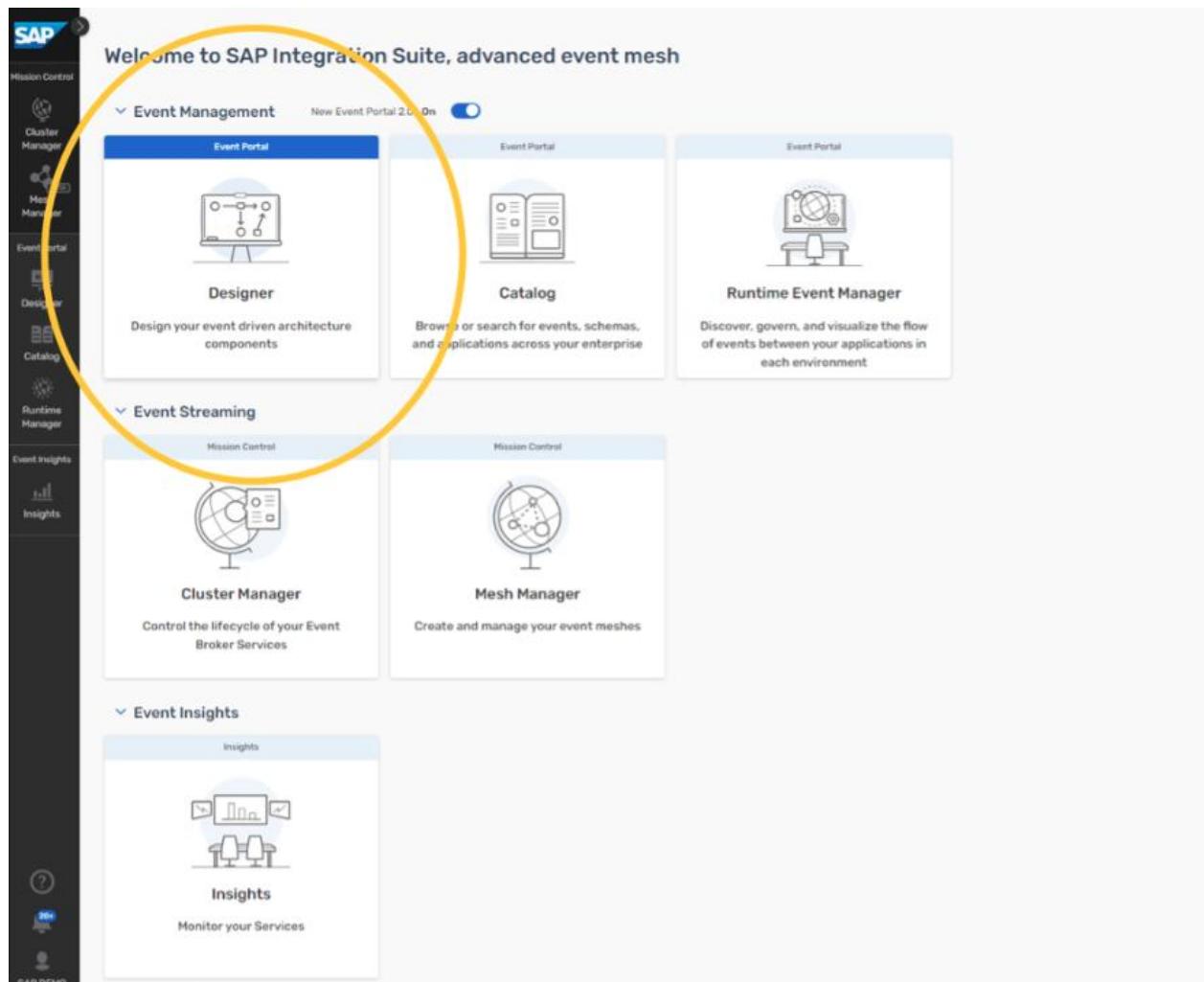
Prerequisites

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.

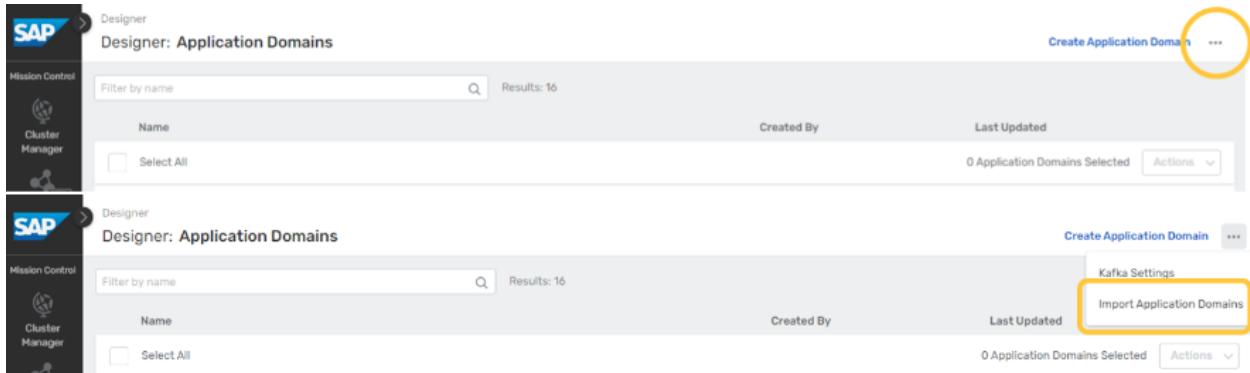
1. From the SAP AEM Console, open the Cluster Manager.



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.



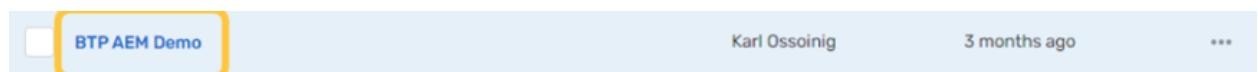
The image contains two screenshots of the SAP Application Domains interface. Both screenshots show a table with columns: Name, Created By, Last Updated, and Actions. A search bar at the top left says 'Filter by name' with a result count of 'Results: 16'. A 'Select All' checkbox is at the top left of the table. In the top screenshot, the 'Create Application Domain' button in the top right is circled in yellow. In the bottom screenshot, the 'Import Application Domains' button in the top right is circled in yellow. The left sidebar of both screenshots shows 'Mission Control' and 'Cluster Manager'.

Download [btp_aem_demo.json](#) to your file system and import it:

Importing Application Domain

The import may take several minutes.

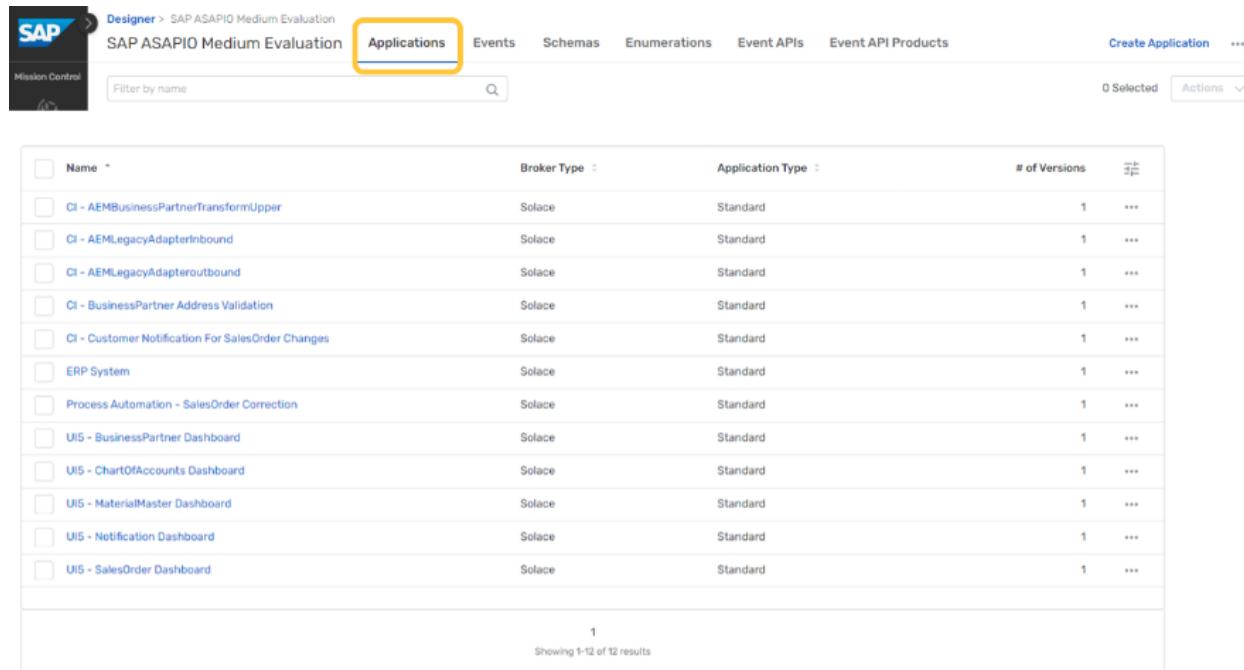
After the import is complete, you will see the evaluation domain in the domains list.



The image shows a list of application domains. The first item in the list is 'BTP AEM Demo', which is highlighted with a yellow box. To its right are the details: 'Karl Ossoinig' (Created By), '3 months ago' (Last Updated), and three vertical dots (...). The left sidebar shows 'Mission Control' and 'Cluster Manager'.

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' and a 'Create Application' button. On the right, there are buttons for '0 Selected' and 'Actions'. The main area displays a table of applications:

Name	Broker Type	Application Type	# of Versions	Actions
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	...

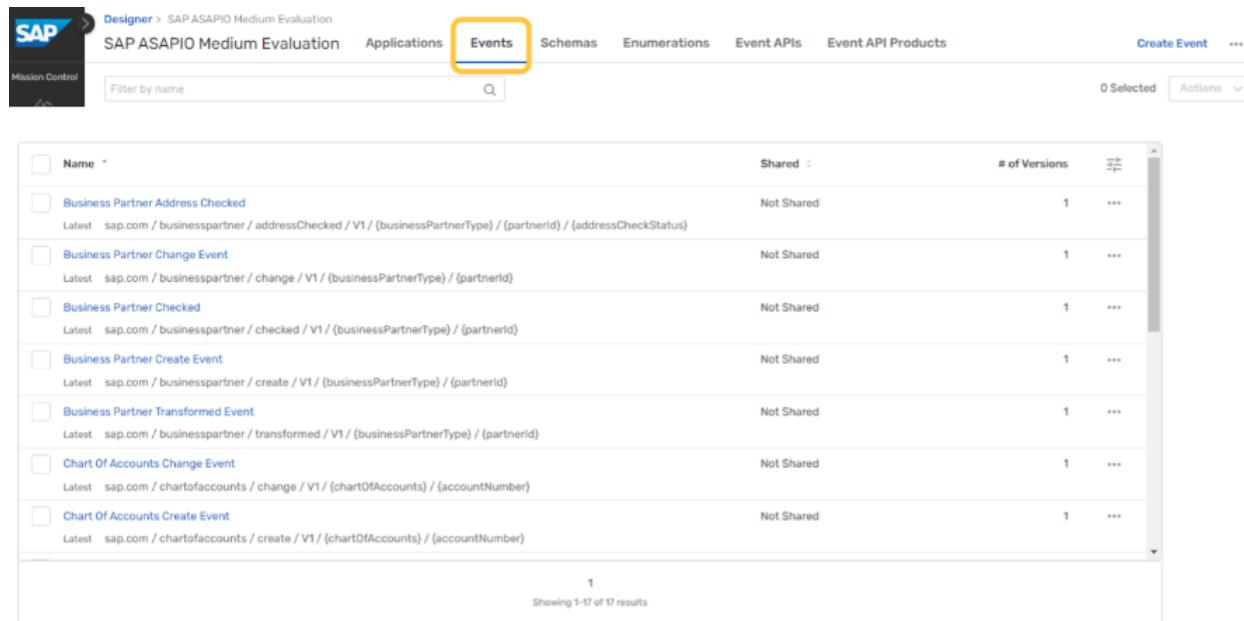
At the bottom center of the table, it says 'Showing 1-12 of 12 results'.

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.

RPP Day 2

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

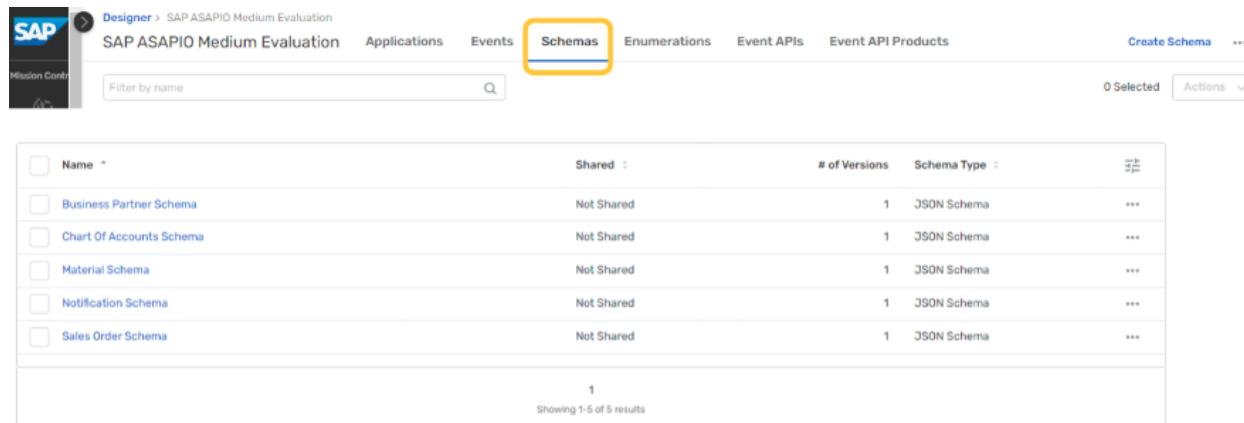


The screenshot shows the SAP ASAPIO Medium Evaluation Designer interface. The top navigation bar includes links for Designer, SAP ASAPIO Medium Evaluation, Applications, Events (which is highlighted with a yellow box), Schemas, Enumerations, Event APIs, Event API Products, Create Event, and more. A search 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.

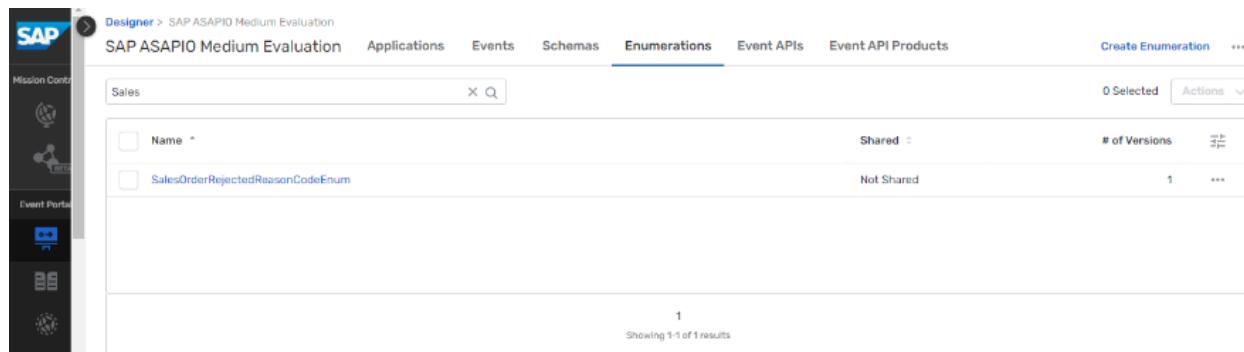


The screenshot shows the SAP ASAPIO Medium Evaluation Designer interface with the Schemas tab highlighted (yellow box). The top navigation bar includes Designer, SAP ASAPIO Medium Evaluation, Applications, Events, Schemas (highlighted), Enumerations, Event APIs, Event API Products, Create Schema, and 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	...
Sales Order Create Event	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.

The screenshot shows the SAP ASAPIO Medium Evaluation Designer interface. The top navigation bar includes 'Designer > SAP ASAPIO Medium Evaluation > Sales Order Create Event'. The main content area is titled 'Sales Order Create Event' with a sub-section 'Event Details: Not Shared'. On the left, there's a sidebar for 'Versions (1)' showing 'v1 (1)' with '1.0.0 [Draft]'. The right side contains several sections: 'Event Version Details' (Version 1.0.0, Draft, Change State), '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), and 'Referenced By' (Applications (1 Sub, 1 Pub) and Event APIs (0 Sub, 0 Pub)). A yellow box highlights the 'Topic Address' field. At the bottom, it shows 'Last Updated on 2023-10-09 07:58:54 by Karl Ossoling' and 'Created on 2023-10-09 07:58:54 by Karl Ossoling'. A 'Close' button is at the bottom right.

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.

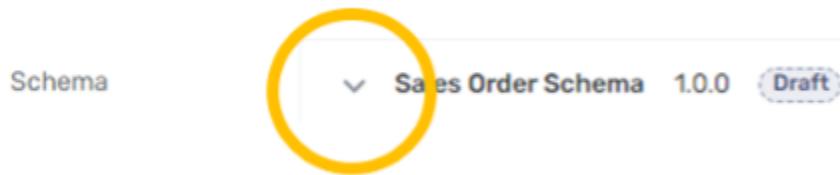
The general format is **ORG/DOMAIN/VERB/VERSION/{ATTRIBUTE1}/{ATTRIBUTE2}/...**

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 "Content" section of the Schema tab. It displays a JSON schema with line numbers on the left. The schema defines an object with properties like "orderHeader" and "salesOrderNumber". A yellow box highlights the "Open Schema" button in the top right corner of the content area.

```
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 OCRMVASCHW = Material Availability Date (Requested)
The 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
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

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  }
```



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' section under 'Event Management'. The 'Catalog' section contains the following text: 'Browse or search for events, schemas, and applications across your enterprise'. Below this, there are sections for Event Streaming (Cluster Manager, Mesh Manager) and Event Insights (Insights).

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

The screenshot shows the Catalog search interface. The 'Events' tab is selected, indicated by a yellow box. A search bar contains the text 'Sales Order', 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 AEM Catalog interface. At the top, there is a navigation bar with tabs: Catalog, Applications, Events (which is selected), Schemas, Enumerations, Event APIs, and Event API Products. Below the navigation bar is a search bar with a magnifying glass icon and a filter icon (a funnel icon) highlighted with a yellow box. Underneath the search bar is a 'Filters' section with three dropdown menus: Application Domains (No Filters), States (No Filters), and Shared (No Filters). On the right side of the filters section is a 'Add Filters' button.

5. Visualize your imported design with a modeled event mesh. Event Portal includes a powerful tool called the Runtime Manager. One of the functions of this tool is to associate a domain model with a "modeled event mesh" running on your launched AEM event services. This allows the Runtime Manager to display a visualization of the interactions between applications and events.

While there are many additional powerful features of Runtime Manager, our evaluation will focus just on visualization.

From the SAP AEM Console, open the Runtime Manager:

The screenshot shows the SAP Integration Suite advanced event mesh welcome screen. On the left is a sidebar with icons for Mission Control, Cluster Manager, Mesh Manager, Event Portal, Designer, Catalog, and Runtime Manager. The main area has a title 'Welcome to SAP Integration Suite, advanced event mesh'. It contains several modules:

- Event Management**: Contains 'Event Portal' (Designer and Catalog) and 'Runtime Event Manager' (Discover, govern, and visualize the flow of events between your applications in each environment).
- Event Streaming**: Contains 'Mission Control' (Cluster Manager) and 'Mesh Manager' (Create and manage your event meshes).
- Event Insights**: Contains 'Insights' (Monitor your Services).

A yellow circle highlights the 'Runtime Event Manager' module.

RPP Day 2

Click on Create Modeled Event Mesh top right:

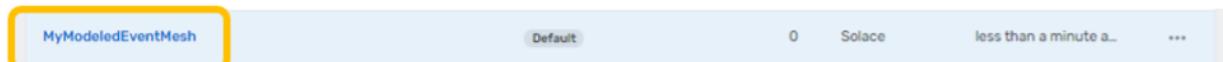


Enter the name of your modeled event mesh and click on Create:

Create Modeled Event Mesh

The screenshot shows the 'Create Modeled Event Mesh' dialog. It has fields for 'Modeled Event Mesh Name' (containing 'MyModeledEventMesh'), 'Type' (set to 'Solace'), and a 'Description' rich text area. Below these are dropdowns for 'Environment' (set to 'Default') and 'Event Broker' (showing '6 Modeled Event Meshes'). A tooltip for 'Environments' provides information about environments in SAP Integration Suite. At the bottom are 'Cancel' and 'Create' buttons, with the 'Create' button highlighted by a yellow box.

Now click on your MEM to open it:



Note that there are no objects in your MEM.

In the Event Broker Connections tab, click on Connect Event Broker:



Use the search box to filter to your services, mark the checkboxes for both and click Add:

Add Existing Event Broker

MyMesh

New Event Broker

Event Brokers	Event Management Agents
<input checked="" type="checkbox"/> MyMesh-Svc1	None
<input checked="" type="checkbox"/> MyMesh-Svc2	None

Cancel Add

You will see both of your brokers listed in the modeled event mesh. For the scope of this evaluation, we will not be exercising the Discovery Scan or Audit capabilities.

Runtime Event Manager > MyModeledEventMesh

MyModeledEventMesh Default Architecture Audit Event Broker Connections Connect Event Broker ...

MyMesh-Svc1	...
MyMesh-Svc2	...

Run Discovery Scan ...

View Connection Details

Event Broker Details

Type: Solace

Hostname:

Message VPN:

Event Management Agent

No Event Management Agents

An Event Management Agent is required before data can be gathered from the event broker.

Connect to an Event Management Agent

What is an Event Management Agent?

Associated Objects

Applications (0) Event API Products (0)

No associated application versions

Next, navigate back to the Designer and open the **BTP AEM Demo** domain.

Under the Applications tab, you will see all the modeled applications. **For each application**, perform the following actions:

- Click on the application's row where it says "Standard" for application type.
- In the preview pane to the right, select the "Add to Environment" extended menu action for version 1.0.0 of the application object.
- Leaving the Default environment selected, pick your Modeled Event Mesh from the second pull down and both of your event mesh services from the Event Broker menu, then click Add.

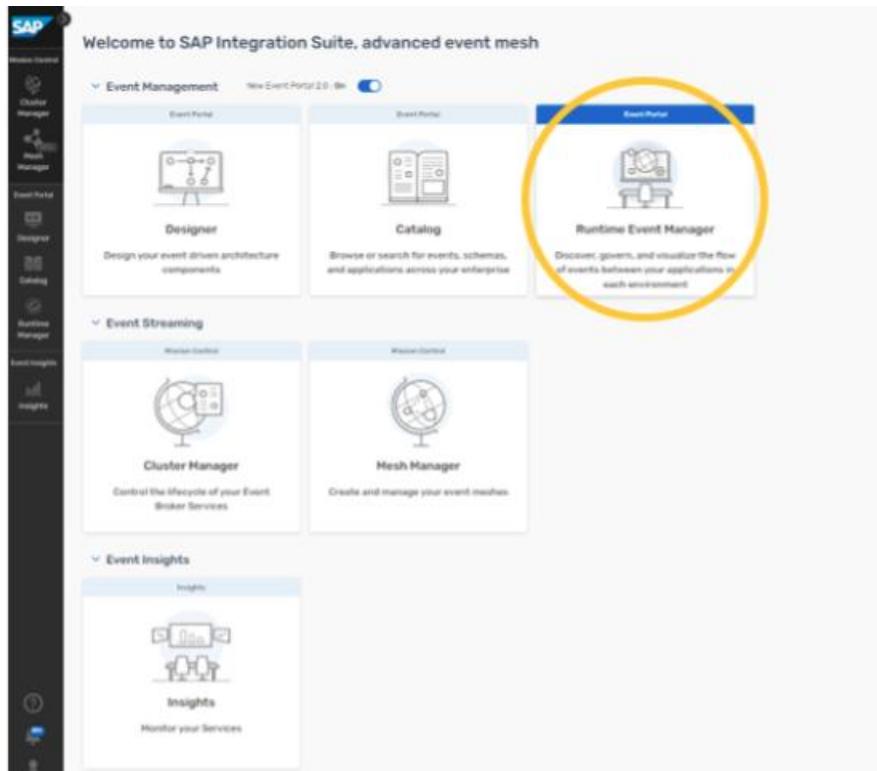
RPP Day 2

The screenshot shows the AEM Designer interface with the 'BTP AEM Demo' project selected. The 'Applications' tab is active, displaying a list of applications. One application, 'CI - AEMBusinessPartnerTransformUpper', is highlighted and has its 'Application Type' set to 'Standard'. On the right, a detailed view of this application shows its 'Application Details' (Broker Type: Solace) and a 'Versions' section with one draft version (1.0.0). The 'Add to Environment' dialog is open, showing the 'Modeled Event Mesh' dropdown set to 'MyModeledEventMesh' and the 'Event Broker' dropdown set to 'MyMesh-Svc1 | MyMesh-Svc2'. The 'Selected Application' field is also populated with 'CI - AEMBusinessPartnerTransformUpper 1.0.0'. The 'Add' button at the bottom of the dialog is highlighted with a yellow box.

This will add the modeled applications to your modeled event mesh. Since these applications reference the events, and those events reference the schemas, all of your model will now be associated with your modeled event mesh.

Finally, navigate back to the Runtime Manager and your modeled event mesh to see the default visualization:

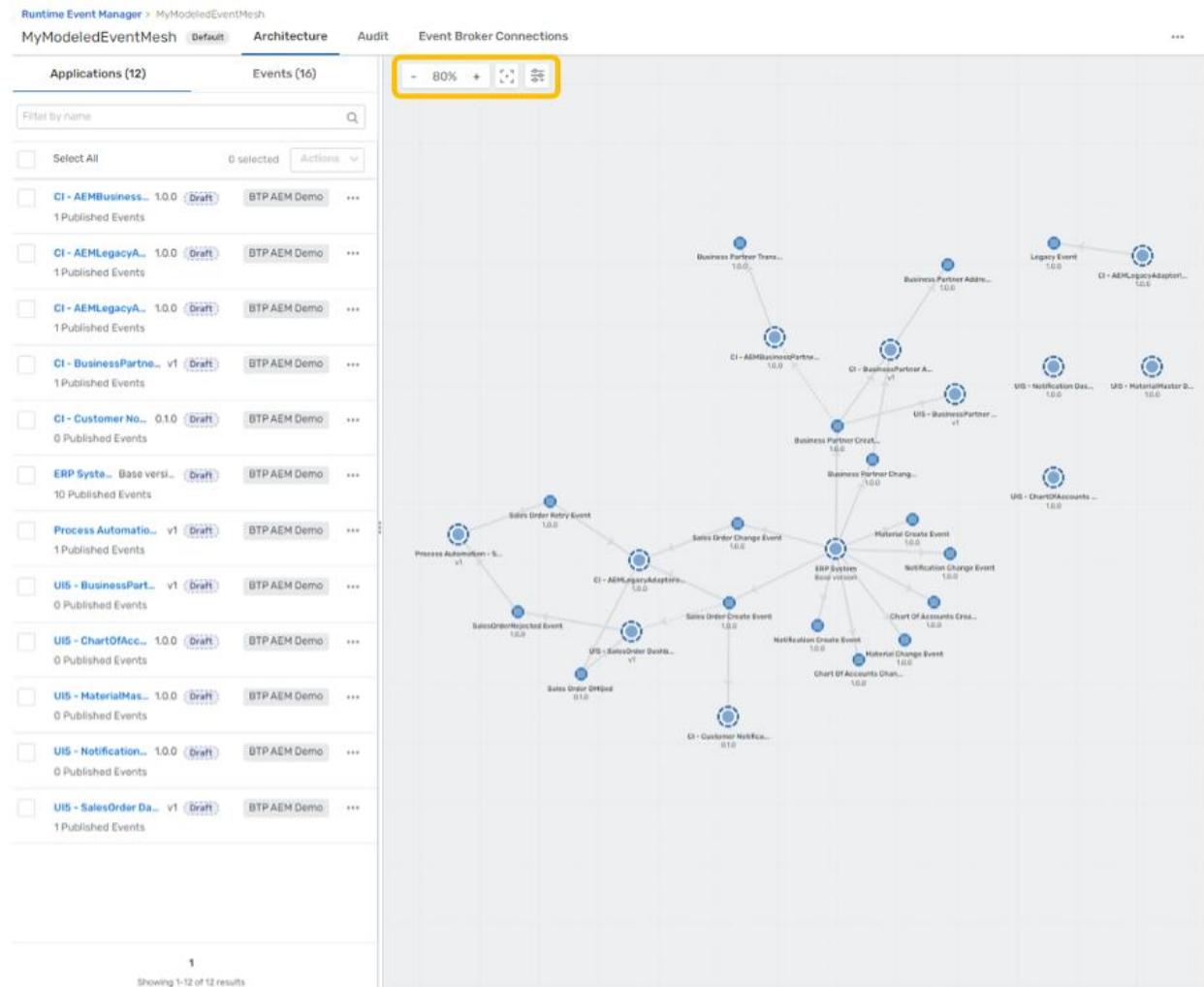
RPP Day 2



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.

RPP Day 2

You can use the view controls to zoom, center and change visualization settings:



You can also re-arrange and save your visualization layout to organize the relationships to your preferences. If you like the changes, click on Publish Layout to save them.

Layout Changed

Publishing changes updates the graph layout
for all users in your organization.

[Discard Changes](#)

[Publish Layout](#)

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

