

Exercise 1

Examine OData Service and create a Destination

Table of Contents

1. Objectives	1
2. Examine an Example OData Service (Northwind)	2
2.1. Metadata	2
2.2. Query String Parameters	2
2.3. Test with Postman	3
3. Create Destination	4
4. Enable Business Application Studio	6
4.1. Subscribe to "SAP Business Applicaiton Studio"	6
4.2. Create Development Spaces	6

1. Objectives

- Examine OData Service and test it
- Create a destination for the Northwind service
- Create dev spaces for Business Application Studio

2. Examine an Example OData Service (Northwind)

We will use the free OData V2 Northwind Service as example.

<https://services.odata.org/V2/Northwind/Northwind.svc/> [<https://services.odata.org/V2/Northwind/Northwind.svc/>]

The screenshot shows a REST client interface with a GET request to `https://services.odata.org/V2/Northwind/Northwind.svc`. The response is displayed in XML format, showing the service metadata. The XML structure includes a `<workspace>` element containing three `<collection>` elements: `Categories`, `CustomerDemographics`, and `Customers`, each with an `<atom:title>` child element.

```

1 <?xml version="1.0" encoding="utf-8" standalone="yes"?>
2 <service xml:base="https://services.odata.org/V2/Northwind/Northwind.svc/" xmlns:atom="http://www.w3.org/2005/Atom"
3   <workspace>
4     <atom:title>Default</atom:title>
5     <collection href="Categories">
6       <atom:title>Categories</atom:title>
7     </collection>
8     <collection href="CustomerDemographics">
9       <atom:title>CustomerDemographics</atom:title>
10    </collection>
11    <collection href="Customers">
12      <atom:title>Customers</atom:title>
13    </collection>

```

2.1. Metadata

- Metadata document describes the OData service
- Entity types
 - ▮ Properties
 - ▮ Key properties
 - ▮ Navigation properties
- Entity sets
- Associations

<https://services.odata.org/V2/Northwind/> [[https://services.odata.org/V2/Northwind/Northwind.svc/\\$metadata/](https://services.odata.org/V2/Northwind/Northwind.svc/$metadata/)]

2.2. Query String Parameters

Parameter	Description
<code>\$count</code>	The <code>\$count</code> system query option allows clients to request a count of the matching resources included with the resources in the response.
<code>\$expand</code>	The <code>\$expand</code> system query option specifies the related resources to be included in line with retrieved resources. You might think of this as an SQL join operation. Only navigation properties can be expanded; you can identify navigation properties in the Data Model entity relationship diagram.

Parameter	Description
\$filter	The \$filter system query option allows clients to filter a collection of resources that are addressed by a request URL.
\$expand	The \$expand system query option specifies the related resources to be included in line with retrieved resources. You might think of this is an SQL join operation. Only navigation properties can be expanded; you can identify navigation properties in the Data Model entity relationship diagram.
\$orderby	The \$orderby system query option allows clients to request resources in a particular order.
\$search	The \$search system query option allows clients to request entities matching a free-text search expression.
\$select	The \$select system query option allows clients to request entities matching a free-text search expression.
\$skip	The \$skip query option requests the number of items in the queried collection that are to be skipped and not included in the result. A client can request a particular page of items by combining \$top and \$skip.
\$top	The \$top system query option requests the number of items in the queried collection to be included in the result. A client can request a particular page of items by combining \$top and \$skip.

Table 1. Query String Parameters

2.3. Test with Postman

There are different tools to test APIs.

- SOAPUI ([Homepage](https://www.soapui.org/) [https://www.soapui.org/])
- Insomnia ([Homepage](https://insomnia.rest/) [https://insomnia.rest/])
- Postman ([Homepage](https://www.postman.com/) [https://www.postman.com/])

In current exercise we will use Postman, as it is the most popular and widely used API Testing tool.

- List of Products → [../Products](#)
- Product with ProductID 3 → [../Products\(3\)](#)
- Expand Category for Product 3 → [../Products\(3\)?\\$expand=Category](#)
- Return first 10 Products → [../Products?\\$top=10](#)
- Return products 11 - 20 → [../Products?\\$top=10&\\$skip=10](#)

3. Create Destination

- We will create a destination for the Northwind service
- You can find destinations on your Subaccount level in Connectivity section

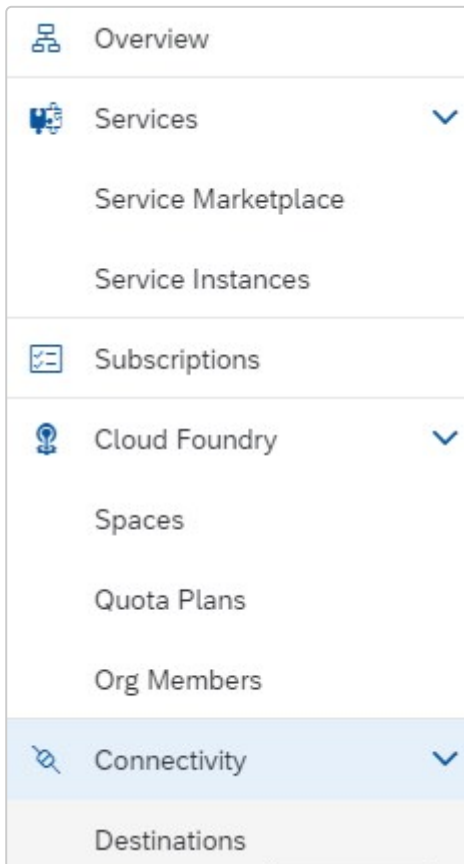


Figure 1. Destination menu

- Add the destination

Destination Configuration

Name: * Northwind
Type: HTTP
Description: Northwind OData services
URL: * https://services.odata.org/V2/Northwind/North...
Proxy Type: Internet
Authentication: NoAuthentication

Additional Properties

New Property

HTML5.Dyna... true
WebIDEAddit... full_url
WebIDEEnab... true
WebIDESyst... Northwind_Data
WebIDEUsage odata_gen

☒ Use default JDK truststore

Figure 2. Creation of new destination

Set up following destination configuration.

Attribute	Value
Name	Northwind
Type	HTTP

Attribute	Value
Description	Northwind OData services
URL	https://services.odata.org/V2/Northwind/Northwind.svc
Proxy Type	Internet
Authentication	NoAuthentication

Add Properties by clicking on **New Property**.

Property	Value
HTML5.DynamicDestination	true
WebIDEAdditionalData	full_url
WebIDEEnabled	true
WebIDESystem	Northwind_Data
WebIDEUsage	odata_gen

Make sure that checkbox "Use default JDK truststore" is enabled.

Save and Check connection



4. Enable Business Application Studio

To enable Business Application Studio you need to subscribe to corresponding Service/Application.

4.1. Subscribe to "SAP Business Application Studio"

1. Go to Subscriptions and Search for "SAP Business Application Studio"
2. If not already subscribed, Subscribe to "SAP Business Application Studio"

The screenshot shows the SAP Business Application Studio interface. On the left, there is a navigation sidebar with the following items: Overview, Services (with a dropdown arrow), Subscriptions (highlighted), Cloud Foundry (with a dropdown arrow), Connectivity (with a dropdown arrow), and Security (with a dropdown arrow). The main content area is titled 'Subaccount: trial - Subscriptions' and shows 'Filtered: 1 of 24'. Below this, there is a section titled 'Extension Suite - Development Efficiency'. A card for 'SAP Business Application Studio' is displayed, indicating it is 'Subscribed' and providing a 'Go to Application' link. The card also includes the text 'Develop, debug, test, and deploy SAP business applications.'

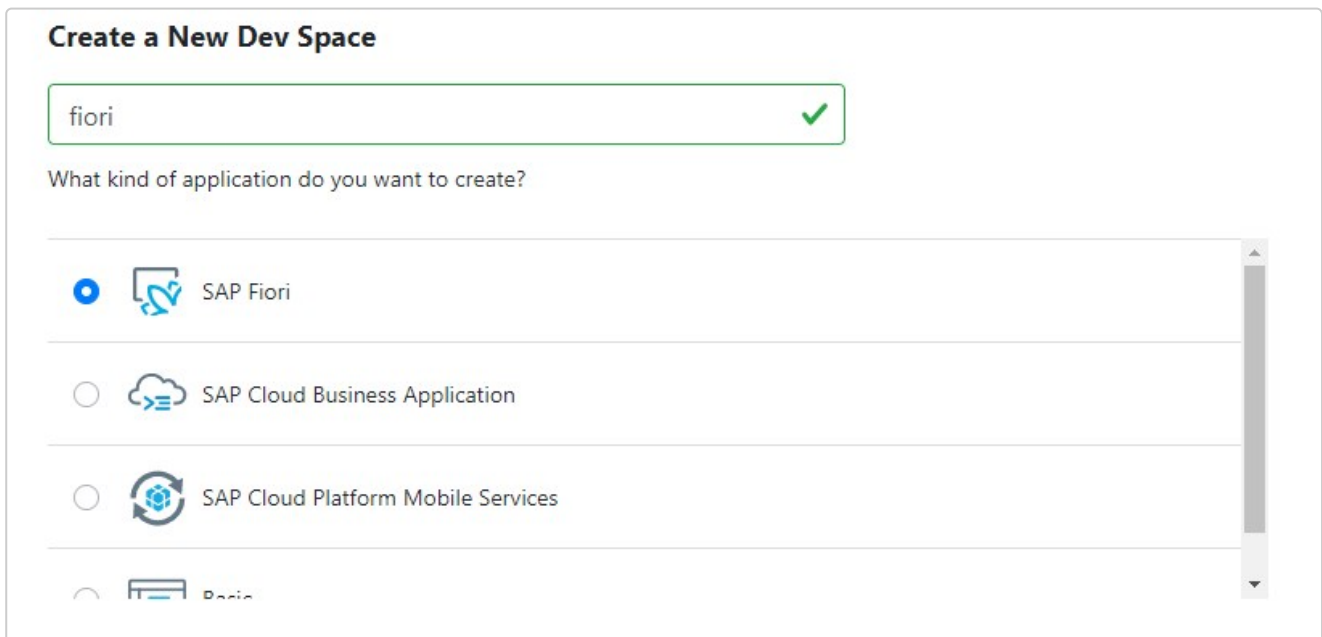
4.2. Create Development Spaces

When starting Business Application Studio you will be asked to create a Development space.

The screenshot shows a dialog box titled 'Dev Spaces'. It contains the following text: 'Create and manage your development environment according to the type of applications you want to develop. You can add extensions and tools to further enhance your development options.' and a blue button labeled 'Create Dev Space'.

Because of the different development tools available in the IDE depending on type of Development Space, we will need two dev spaces for all developments during this course.

Create new SAP Fiori development space with name "fiori"



Create a New Dev Space

fiori ✓

What kind of application do you want to create?





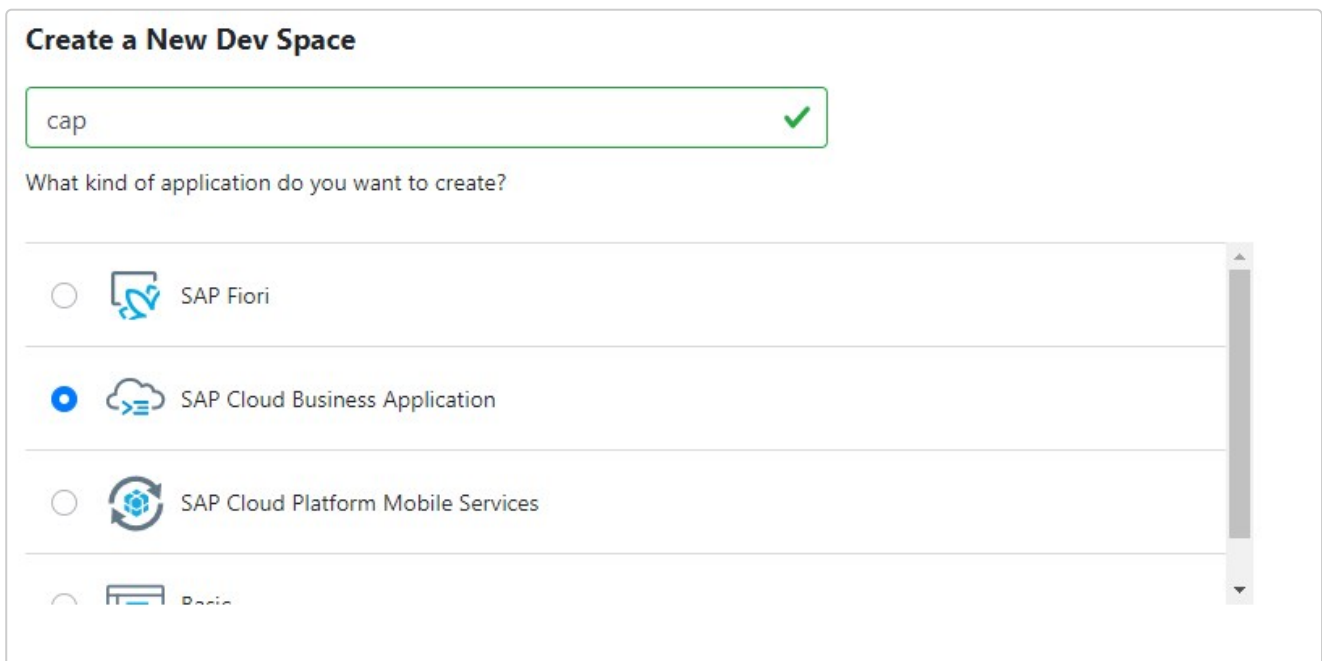
- ☒  SAP Fiori
- ☐  SAP Cloud Business Application
- ☐  SAP Cloud Platform Mobile Services
- ☐  Basic

Figure 3. Creation of FIORI dev space

Create new SAP Cloud Business Application Development space with name "cap".



Create a New Dev Space

cap ✓

What kind of application do you want to create?





- ☐  SAP Fiori
- ☒  SAP Cloud Business Application
- ☐  SAP Cloud Platform Mobile Services
- ☐  Basic

Figure 4. Creation of CAP dev space

For the next Exercise we can already start the "fiori" dev space.

Dev Spaces

Create and manage your development environment according to the type of applications you want to develop.

You can add extensions and tools to further enhance your development options.

[Create Dev Space](#)

You are allowed a maximum number of 2 dev spaces, and only 1 can be run at a time.











 cap SAP Cloud Business Application	STOPPED	Created On 19.10.2020 17:48	ID ws- 8gbwj	   
 fiori SAP Fiori	RUNNING	Created On 19.10.2020 17:43	ID ws- hvp5q	   

Figure 5. Dev Space overview