

EXERCISE 08 – SECURE YOUR APPLICATION

SAP Partner Workshop



60 min

Description

In this exercise, you'll learn how

- To secure your application

For further reading on SAP Cloud SDK, click link below.

<https://www.sap.com/germany/developer/topics/s4hana-cloud-sdk.html>

Target group

- Developers
- People interested in learning about S/4HANA extension and SAP Cloud SDK

Goal

The goal of this exercise is to build a basic extension app on Cloud Foundry using Business Partner Example.

Prerequisites

Here below are prerequisites for this exercise.

- A trial account on the SAP Cloud Platform. You can get one by registering here <https://account.hanatrial.ondemand.com>
- Cloud Foundry CLI Tool
- Apache Maven
- Java JDK 8
- IntelliJ IDEA

Refer to Exercise 2 to get step-by-step guide on system setup and pre-requisites.

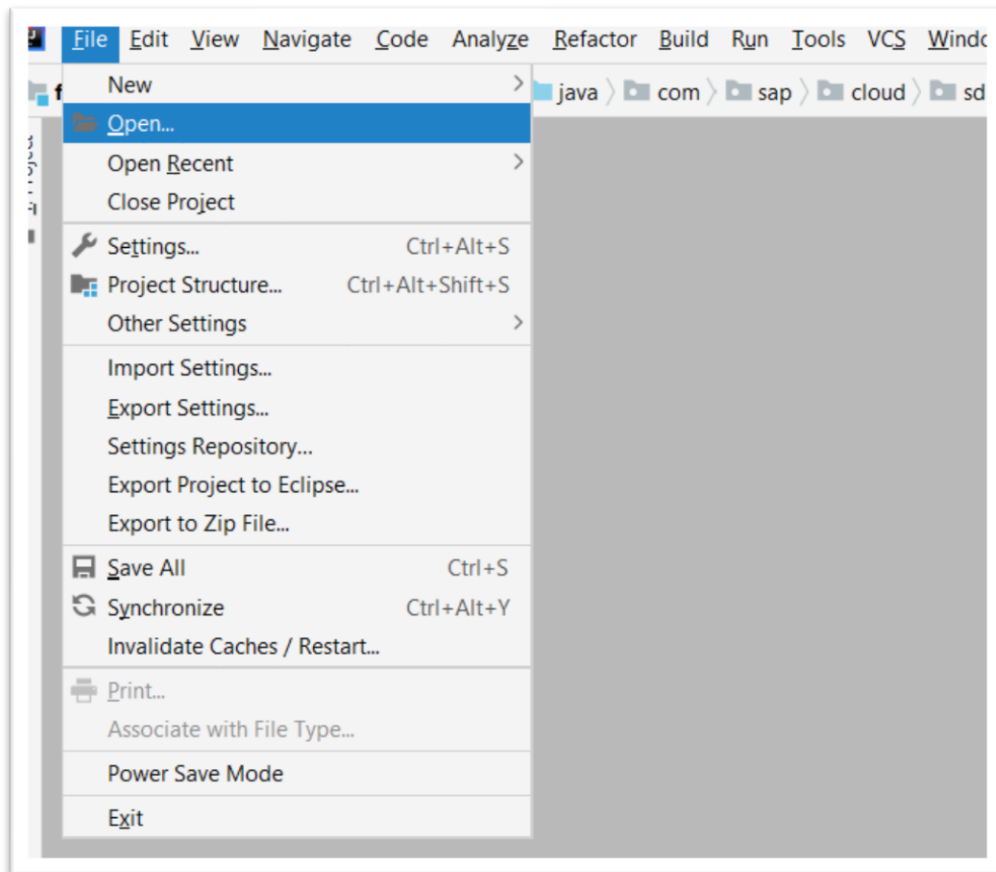
Install npm

If npm is not installed, you can download and install it from here: <https://www.npmjs.com/>

Step 1 – Download and build the project

Download the Exercise_8_Starting.zip file from [here](#) and extract it locally.

Similar to the previous exercise, open the project in IntelliJ Web IDEA.



Step 2 - Install the App Router

See the file `<your project location>\address-manager\approuter\approuter\package.json`.

This is the descriptor required to install the correct version of the approuter using npm tool (NodeJS Packet Manager).

To start the installation run the following commands:

```
cd <your project location>\address-manager\approuter\approuter
npm config set @sap:registry https://npm.sap.com
npm install
```

Step 3 - Configure the App Router

We already provide required configuration files for the App Router. However, you need to adapt some parameters for your execution environment.

In the file *<your project location>\address-manager\approuter\xs-security.json*, change the subaccount ID. For example, your trial subaccount ID can look as follows: p2000389027trial.

In the file *<your project location>\address-manager\approuter\manifest.yml*:

- In *route*, change the subaccount ID. For example, your trial subaccount ID can look as follows: p2000389027trial
- In *destination*, change the URL with your own generated route for your Business Partner Address Manager application that was deployed in previous modules.

Step 4 - Delete existing instances of the XSUAA service

In case you already created an instance of the XSUAA service and called it my-xsuaa, you should first delete this instance in order to create a new one in the next step.

To do that execute the following commands:

```
cf api https://api.cf.eu10.hana.ondemand.com
```

```
cf login -u <your email address>
```

```
cf unbind-service address-manager my-xsuaa
```

```
cf delete-service my-xsuaa
```

Step 5 - Create a New XSUAA Instance using xs-security.json

To create a new instance of XSUAA using the provided xs-security.json configuration file, execute the following commands in CLI. You can skip the login if you already have logged in before.

```
cf api https://api.cf.eu10.hana.ondemand.com
```

```
cf login -u <your email address>
```

```
cf create-service xsuaa application my-xsuaa -c xs-security.json
```

Step 6 – Update manifest.yml file

Update the mock-server url in manifest.yml file

Step 7 – Secure the Business Partner Application

Open the *web.xml* file in **src/main/webapp/WEB-INF** and uncomment below code.

```
<login-config>
    <auth-method>XSUAAC</auth-method>
</login-config>

<security-role>
    <role-name>ViewAddresses</role-name>
</security-role>

<security-constraint>
    <web-resource-collection>
        <web-resource-name>Read business partners</web-resource-name>
        <url-pattern>/api/business-partners/*</url-pattern>
    </web-resource-collection>
    <auth-constraint>
        <role-name>ViewAddresses</role-name>
    </auth-constraint>
</security-constraint>
```

Step 8 - Deploy the New Version of the Application and the App Router

To deploy the Business Partner Address Manager application with the introduced security, run the following commands:

```
cd <your project location>\address-manager
mvn clean package
```

```
cf push
```

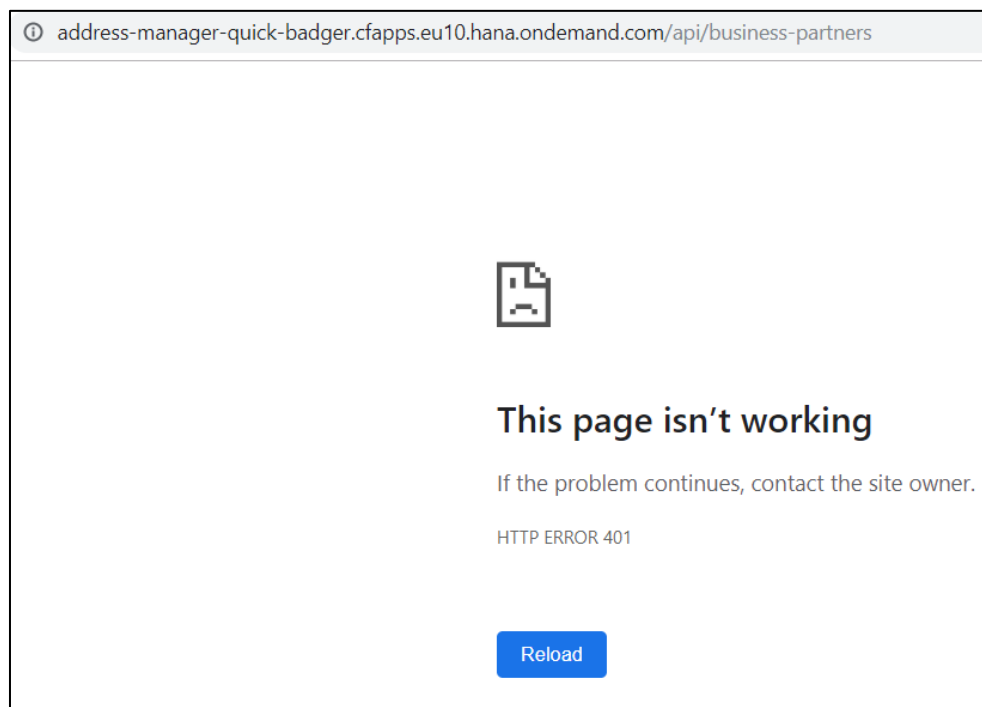
To deploy the App Router, run the following commands:

```
cd <your project location>\address-manager\approuter  
mvn clean package  
cf push
```

After the deployment is finished, try to access the business-partner api.

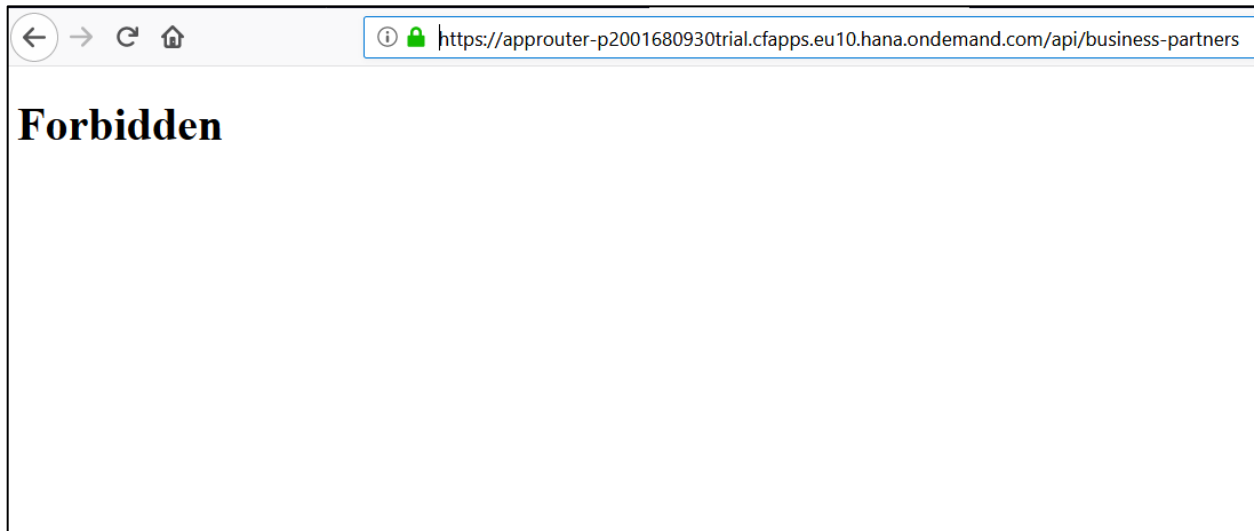
URL - <https://address-manager-quick-badger.cfapps.eu10.hana.ondemand.com/api/business-partners>

It should show 401 (unauthorized error message).



Now try to access the same api from App Router url. The output should look like below.

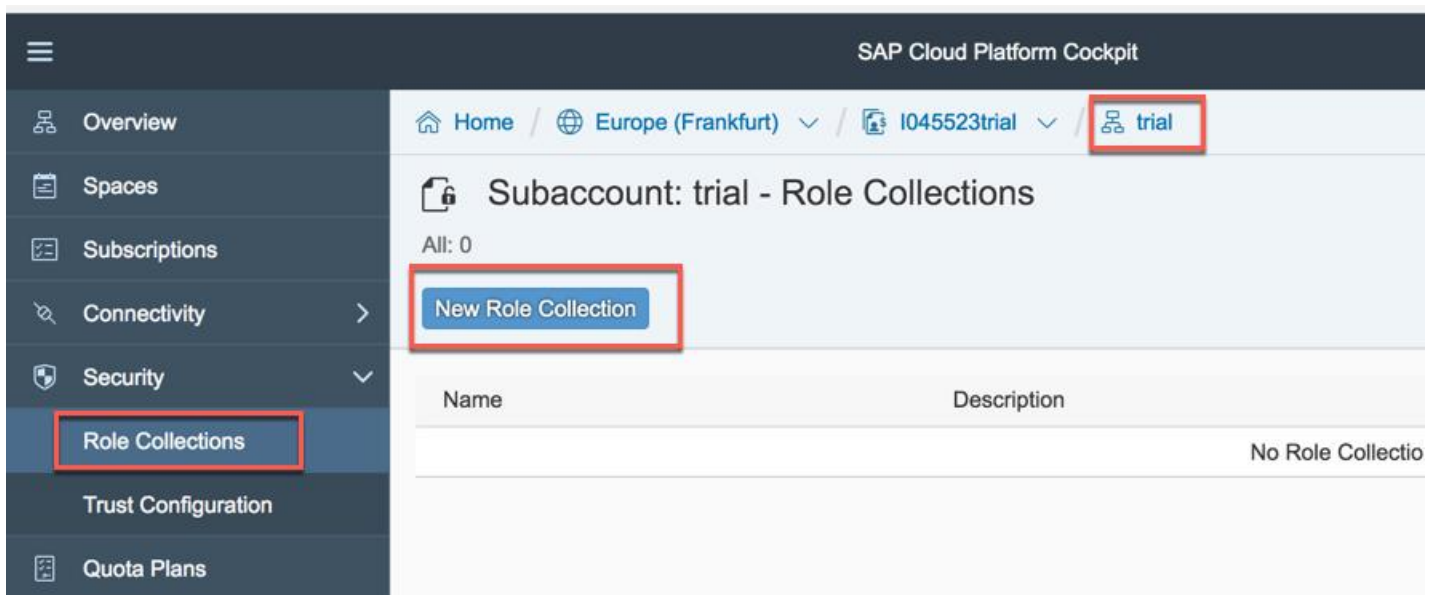
https://approuter-<subaccount_id>.cfapps.eu10.hana.ondemand.com/api/business-partners



The Forbidden error is coming because we have not assigned the role to user. Let us fix this error message.

Step 9 – Assign Role to user

open the SAP CP cockpit and navigate to your Cloud Foundry space. Expand the **Security** branch and choose **Role Collections**. Click on **New Role Collection**.



Enter the name **BPManager** and the description **Business Partners Manager** and click on **Save**.

New Role Collection

*Name:

Description:

You should have a new role collection in the list. Click on this new role collection.

SAP Cloud Platform Cockpit

Home / Europe (Frankfurt) / I045523trial / trial

Subaccount: trial - Role Collections

All: 1

Name	Description
BPManager	Business Partners Manager

Click on **Add Role**.

SAP Cloud Platform Cockpit

Home / Europe (Frankfurt) / I045523trial / trial / [BPManager](#)

Role Collection: BPManager - Overview

All: 0

Application Identifier	Role Name	Role Template
No Roles		

Select the proper **Application Identifier** and choose for both **Role Template** and **Role** the item **Viewer**, then click on **Save**.

Add Role

*Application Identifier:

address-manager-p2001680930trial!t20829

*Role Template:

BusinessPartnerViewer

*Role:

BusinessPartnerViewer

Save

Cancel

A new role has been successfully added.

Select **Trust Configuration** and click on the **SAP ID Service**.

Overview

Spaces

Subscriptions

Connectivity

Security

Role Collections

Trust Configuration

Quota Plans

SAP Cloud Platform Cockpit

Home / Europe (Frankfurt) / I045523trial / trial

Subaccount: trial - Trust Configuration

All: 1

New Trust Configuration

Status	Name	Description
Default	SAP ID Service	Default identity provider

Enter your user for the SAP CP and click on **Show Assignments**

Role Collection Assignment

SAP Cloud Platform Cockpit

Home / Europe (Frankfurt) / I045523trial / trial / SAP ID Service

Trust Configuration: SAP ID Service - Role Collection Assignment

All: 0

*User:

simmaco.ferriero@sap.com

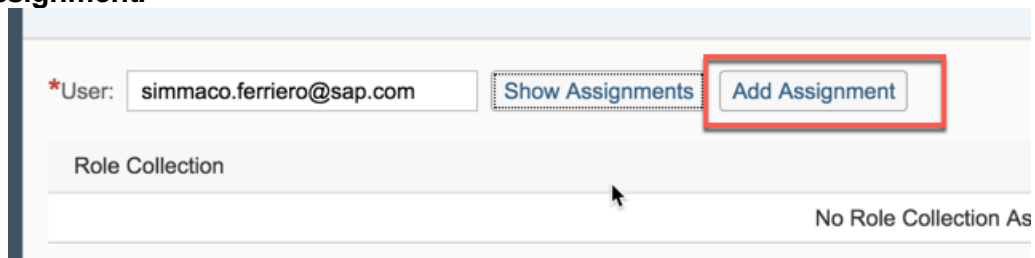
Show Assignments

Add Assignment

Role Collection

No Role Collection Assignments

Click on **Add Assignment**.

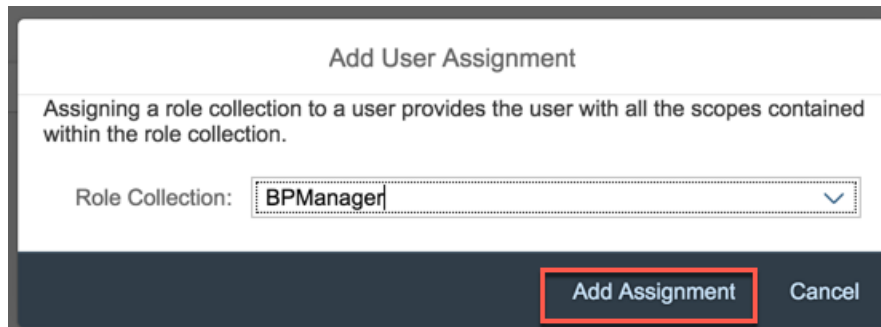


*User:

Role Collection

No Role Collection As

Select the **BPManager** role rollection and click on **Add Assignment**.



Add User Assignment

Assigning a role collection to a user provides the user with all the scopes contained within the role collection.

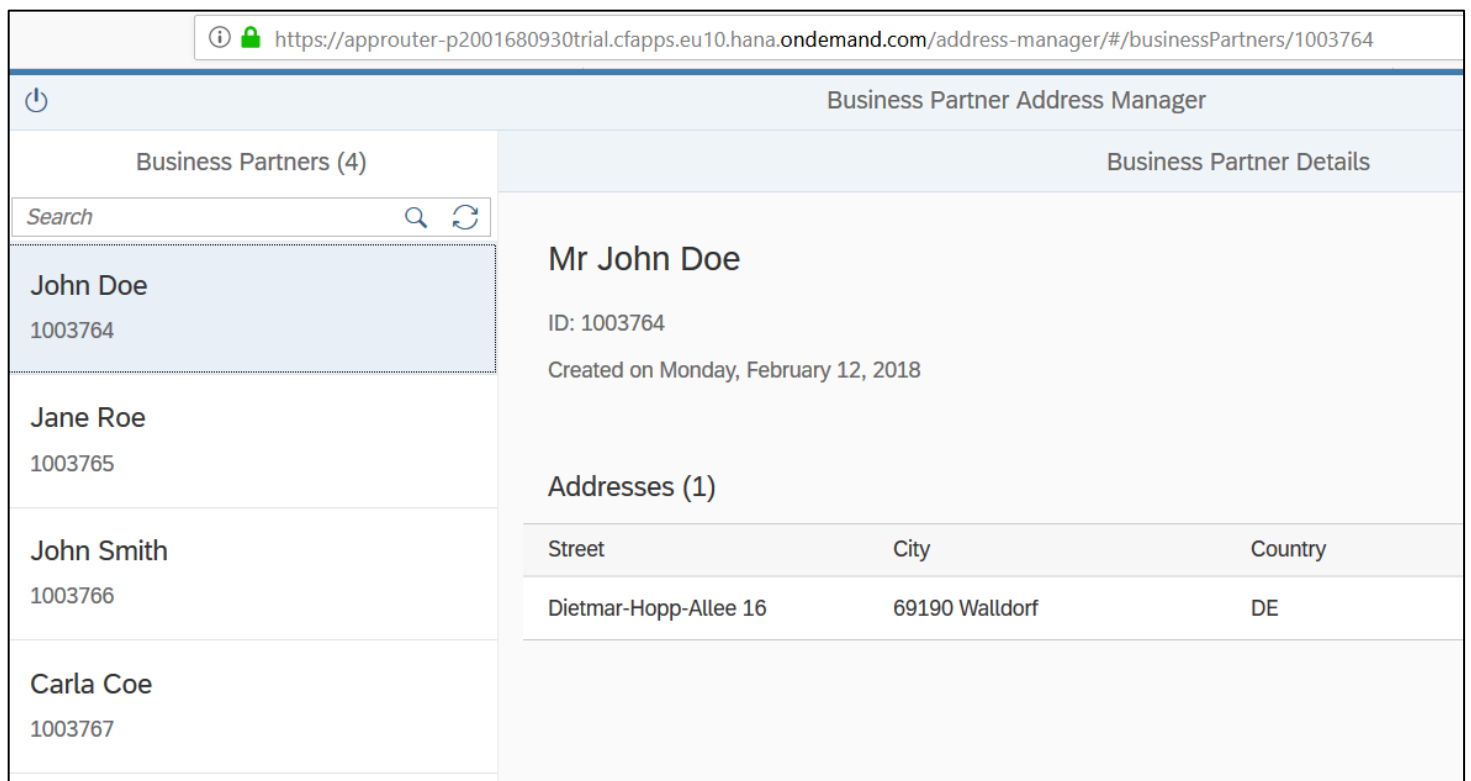
Role Collection:

Completely close your browser since you need to relogin.

Open Address Manager using App Router URL.

https://approuter-<subaccount_id>.cfapps.eu10.hana.ondemand.com/address-manager/

The UI and all services should work.



Business Partner Address Manager

Business Partners (4)

Search

John Doe
1003764

Jane Roe
1003765

John Smith
1003766

Carla Coe
1003767

Mr John Doe

ID: 1003764

Created on Monday, February 12, 2018

Addresses (1)

Street	City	Country
Dietmar-Hopp-Allee 16	69190 Walldorf	DE

Congratulation! You have successfully made your application secure.