

Real Life Learning Exercise - Optional

<https://community.sap.com/t5/technology-blogs-by-members/running-your-own-blockchain-on-the-sap-btp-kyma-trial-a-hands-on-how-to/ba-p/13724580>

Step 1: set up the SAP BTP Kyma Runtime Trial (40 minutes)

The screenshot shows the SAP BTP Cockpit interface for a Kyma Runtime Trial. The left sidebar contains navigation options: Overview, Services, Service Marketplace, Instances and Subscriptions (selected), Cloud Foundry, HTML5 Applications, Connectivity, Security, Entitlements, and Usage Analytics. The main content area is titled 'Subaccount: trial - Instances and Subscriptions' and includes a 'Create' button. It is divided into three sections: 'Subscriptions (1)' showing 'SAP Business Applic...' with a 'Subscribed' status; 'Instances (1)' showing a service instance 'B847C443-969E-4FC5-' with a 'Created' status; and 'Environments (2)' showing two environment instances, 'dadbf688trial' and 'dadbf688trial_trial', both with 'Created' status. On the right, a detailed view for 'dadbf688trial_trial' is shown, including environment details (Kyma Environment, Kyma Runtime Trial), creation information (16 Jul 2024), and API URLs for the API Server and Kubeconfig. A warning indicates the trial account expires in 14 days. The 'Labels (0)' section is empty with an 'Add' button.

my console url:

<https://dashboard.kyma.cloud.sap/?kubeconfigID=B847C443-969E-4FC5-A4D8-CBE54AA2442E>

APIServerURL:

<https://api.e9632ce.kyma.ondemand.com>

KubeconfigURL:

<https://kyma-env-broker.cp.kyma.cloud.sap/kubeconfig/B847C443-969E-4FC5-A4D8-CBE54AA2442E>

Name:

dadbf688trial

Trial account expiration details:

Your cluster expires in 14 days.

The Kyma Trial Dashboard

The screenshot shows the SAP Kyma Trial Dashboard for a cluster named 'garden-kyma--e9632ce-external'. The dashboard features a sidebar with navigation options: Cluster Details, Namespaces, Events, Storage, Configuration, and Kyma. The main content area includes a banner for 'Introducing Modules' with a 'Learn More' link. Below this is a 'Cluster Details' section with metadata (Kubernetes Version: v1.28.9, Storage Type: Session Storage, API Server Address: https://api.e9632ce.kyma.ondemand.com, Provider: AWS) and 'Installed Modules' (3). The 'Monitoring and Health' section displays several metrics: CPU Usage (3%), Memory Usage (16%), Nodes (1), Pods Overview (Total Pods: 33, Healthy Pods: 33, Falling Pods: 0), and Deployments Overview (Total Deployments: 20, Healthy Deployments: 20, Falling Deployments: 0). There are also sections for Daemon Sets Overview and Stateful Sets Overview.

Step #1 is completed, you now have a SAP BTP Kyma Trial Account and you are able to access the SAP Kyma Trial Dashboard and you have the Urls to work with your SAP Kyma Trial Container.

Step 2: Get atSigns and atKeys (20 minutes)

Go to the atSign registrar website and create an Account and get 2 "free" atSigns, this is the url

<https://my.atsign.com/choose-atsign/6711ef36cddd9e71be7a18b795dc1c8fac0fe9afe949a49383d79e5e366c5ae6>

My atSigns: @coffeeliving6968

Download, install and activate using atWavi App

Get atKey and step #2 is completed.

Step 3: Deploy 2 enterprise blockchain servers to your SAP BTP Kyma Trial Runtime (21 minutes)

Create two yml file (atkrypto-v1.yml and atkrypto-v2.yml)

Upload YAML

Drag your file here or click to replace
atkrypto-v1.yml uploaded

or paste it here:

```
1 kind: Namespace
2 apiVersion: v1
3 metadata:
4   name: atkrypto-v1
5   labels:
6     name: atkrypto-v1
7
8 ---
9 kind: PersistentVolumeClaim
10 apiVersion: v1
11 metadata:
12   name: atkrypto-v1
13   namespace: atkrypto-v1
14   labels:
15     app: atkrypto-v1
16 spec:
17   accessModes:
18     - ReadWriteOnce
19   resources:
20     requests:
21       storage: 1Gi
22
23 ---
24 apiVersion: apps/v1
```

You can upload multiple resources, separated by "---" in your YAML file. If the resource already exists, it will be updated. Otherwise, a new one is created. If you don't specify a namespace, the "default" is used.

Uploaded Resources

Validate resources:

5 resources will be created.

- > Namespace atkrypto-v1 ✓
- > PersistentVolumeClaim atkrypto-v1 ✓
- > StatefulSet atkrypto-v1 ✓
- > Service atkrypto-v1-svc ✓
- > APIRule atkrypto-v1-api ✓

[Upload](#) [Cancel](#)

and then open the link related to atkrypto-v1-api and v2 rules and make a note of the url

<https://atkrypto-v1.e9632ce.kyma.ondemand.com>

<https://atkrypto-v2.e9632ce.kyma.ondemand.com>

Step 3 is completed.

Step 4: upload the atKey for each of the enterprise Blockchain server instances (10 minutes)

To upload the atKeys you have to modify the API URLs as follows:

atKey Uploads atkrypto-v1

API URL: <https://atkrypto-v1.e9632ce.kyma.ondemand.com/upload.html>

atKey Uploads atkrypto-v2

<https://atkrypto-v2.e9632ce.kyma.ondemand.com/upload.html>

All of the steps in Kyma are finished at this point and we are ready to start each Blockchain Instance.

To do this you need to use Postman to send API commands to your Blockchain Instances, so the next step

will be to install Postman.

Step #4 is COMPLETED

Step 5: Get Postman (around 10 minutes)

Go to Postman website <https://www.postman.com/> and sign-up and then you can use the free version of Postman.

and once you have signed up you will be able to download Postman and install it on your Computer

<https://www.postman.com/downloads/>

Install Postman and sign in

Step 5 is completed

Step 6: Start your enterprise Blockchain server instances on SAP BTP Kyma Trial (15 minutes)

You will need the API Urls for your Blockchain Instances

atkrypto-v1

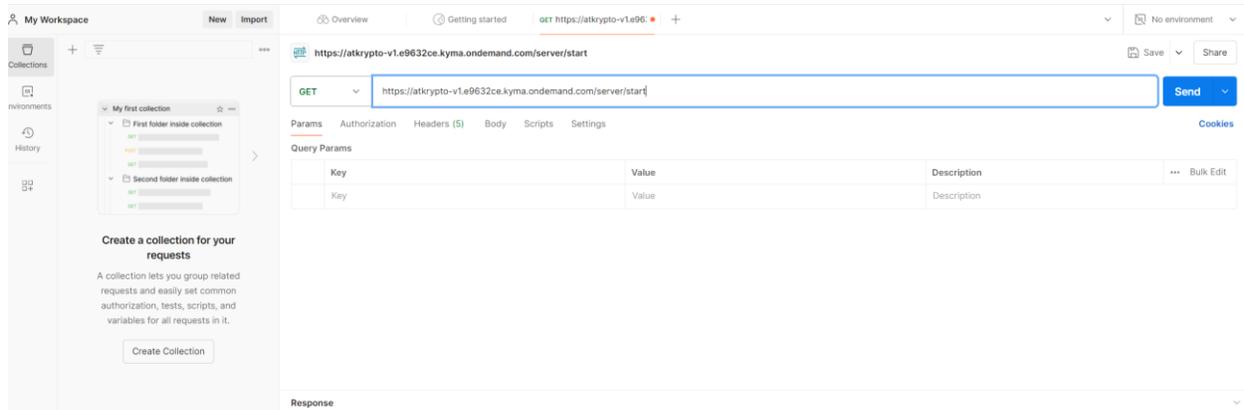
<https://atkrypto-v1.e9632ce.kyma.ondemand.com>

atkrypto-v2

<https://atkrypto-v2.e9632ce.kyma.ondemand.com>

First we need to start the atKrypto-v1 server through POST to /server/start

<https://atkrypto-v1.e9632ce.kyma.ondemand.com/server/start>



We can verify this by blockchain API GET /blockchain

<https://atkrypto-v1.e9632ce.kyma.ondemand.com/blockchain>

Now we need to do that same again and start the second Blockchain Server Instance
atkrypto-v2

<https://atkrypto-v2.e9632ce.kyma.ondemand.com/server/start>

<https://atkrypto-v2.e9632ce.kyma.ondemand.com/blockchain>

Step 6 is completed

Step 7: Create a Blockchain (around 30 minutes)

we will need Postman again, pick one of the Blockchain Server Instances, I will take
atkrypto-v1

atkrypto-v1 API Url is <https://atkrypto-v1.e9632ce.kyma.ondemand.com>

Now we need the Create a Blockchain API

To create first Blockchain we can use /blockchain API with POST request and raw body in
JSON format

describing the name of your blockchain as following:

```
{  
  "name": "My first KYMA Blockchain"
```

```
}
```

The screenshot shows a REST client interface with the following details:

- Method:** POST
- URL:** `https://atkrypto-v1.e9632ce.kyma.ondemand.com/blockchain`
- Body:**

```
{
  "name": "My first KYMA Blockchain"
}
```
- Response:**

```
{
  "id": "9b45a1e7-8643-4cfa-859b-145422a64222",
  "name": "My first KYMA Blockchain",
  "length": 0,
  "lastBlock": null,
  "pendingBlock": null
}
```
- Status:** 201 Created
- Time:** 103 ms
- Size:** 435 B
- Actions:** Save as example

```
{
```

```
  "id": "9b45a1e7-8643-4cfa-859b-145422a64222",
```

```
  "name": "My first KYMA Blockchain",
```

```
  "length": 0,
```

```
  "lastBlock": null,
```

```
  "pendingBlock": null
```

```
}
```