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## workshop-telkom-partnership-feb2025



/ Lab 3 - Build and Deploy Custom Function with Watson Machine Learning /



lourensius-bisma Update README.md

d6a0329 · 4 days ago



Name	Name	Last commit date
..		
Online-eCommerce.csv	Add files via upload	4 days ago
QnA to dataframe-for ...	Add files via upload	4 days ago
README.md	Update README.md	4 days ago

README.md



# Build and Deploy Custom Function

## Import dataset used to project

1. Download dataset [here](#)
2. Open your project --> go to Asset tab --> click Import Asset button --> click Data Asset

## Import assets

Select how to find the assets and then select the items to import as assets.

Connected data

Local file

Project files

Custom foundation model

Import asset from local file

1

○ ○

Data asset


Model

Cancel

Import

3. Click Browse button --> select dataset you already downloaded --> click Done button

## Import data files



Drop data files here or browse for files to upload

Add files as data assets

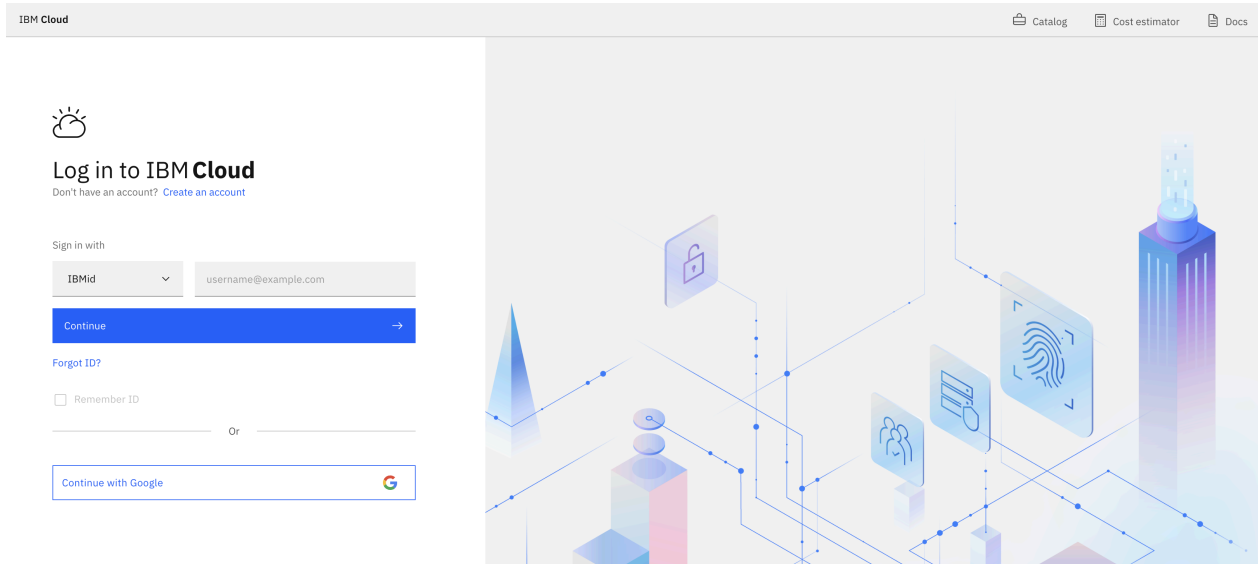
Browse

Back

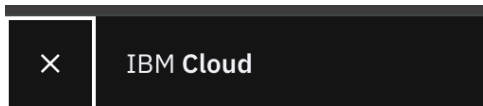
Done

## Get COS credentials from IBM Cloud

1. Open this url <https://cloud.ibm.com/login>



2. Click Hamburger icon --> click Resource list

 **Dashboard** **Projects** **Resource list** **Containers** > **Databases** > **Infrastructure** > **Observability** > **Platform Automation** > **Security** > **API Management** > **Cloud Pak for Data** > **Partner Center** > **Quantum** > **SAP** **Satellite** > **VMware** > **watsonx****Browse all services...** **Navigation settings** >

3. Expand Storage accordion --> select product Cloud Object Storage

Resource list

Name	Group	Location	Product	Status	Tags
Filter by name or IP address... Filter by group... Filter... Filter... Filter... Filter...					
▼ Compute (0)					
▼ Containers (2+)					
▼ Networking (0)					
▲ Storage (1)					
cc-6950005cap-qef4xq38-cos	cc-6950005cap-qef4xq38	Global	Cloud Object Storage	Active	—
▼ Converged infrastructure (0)					
▼ Enterprise applications (0)					
▼ AI / Machine Learning (7+)					
▼ Analytics (1+)					
▼ Blockchain (0)					
▼ Databases (1+)					
▼ Developer tools (0)					
▼ Logging and monitoring (1+)					
▼ Migration (0)					
▼ Integration (0+)					

4. Type your project name to search exact bucket name in your IBM Cloud Object Storage --> copy bucket name into somewhere

Cloud Object Storage

Instances /

cc-6950005cap-qef4xq38-cos

Buckets Service credentials Instance Usage Plan

workshop

Create bucket

5. Copy your COS credentials into somewhere

Cloud Object Storage

Instances /

cc-6950005cap-qef4xq38-cos

Buckets Service credentials Instance Usage Plan

You can generate a new set of credentials for cases where you want to manually connect an app or external consumer to an IBM Cloud service. [Learn more](#)

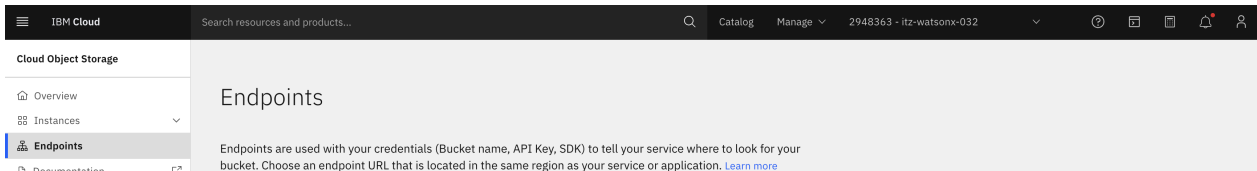
workshop

New Credential

Key name	Date created
WDP-Viewer-workshoptelkomfeb2025-donotdelete-pr-fmn11orlgrcmz7-2025-02-16T08:20:35.415Z	2025-02-16 3:20 PM
WDP-Editor-workshoptelkomfeb2025-donotdelete-pr-fmn11orlgrcmz7-2025-02-16T08:20:35.415Z	2025-02-16 3:20 PM

```
{  "apikey": " ",  "cos_hmac_keys": {    "access_key_id": " ",    "secret_access_key": " "  },  "endpoints": {    "http": "https://s3.us-south-1.amazonaws.com/ ",    "https": "https://s3.us-south-1.amazonaws.com/ "  },  "iam_apikey_desc": "API Key for WDP-Viewer-workshoptelkomfeb2025-donotdelete-pr-fmn11orlgrcmz7-2025-02-16T08:20:35.415Z",  "iam_apikey_id": " ",  "iam_apikey_name": "WDP-Viewer-workshoptelkomfeb2025-donotdelete-pr-fmn11orlgrcmz7-2025-02-16T08:20:35.415Z",  "iam_role_crn": "crn:ibm:iam:us-south-1:838627874c472721:2e1e...",  "iam_serviceid_crn": "crn:ibm:iam:us-south-1:838627874c472721:2e1e...",  "resource_instance_id": "838627874c472721:2e1e..."}
```

6. Go to Endpoints in left section --> copy COS endpoint that is labelled with 'Public' and 'us-geo'

The screenshot shows the IBM Cloud 'Endpoints' page. On the left is a sidebar with 'Cloud Object Storage' selected, containing links for 'Overview', 'Instances', and 'Endpoints'. The main content area is titled 'Endpoints' and includes a brief explanation: 'Endpoints are used with your credentials (Bucket name, API Key, SDK) to tell your service where to look for your bucket. Choose an endpoint URL that is located in the same region as your service or application. [Learn more](#)'.

Region	Endpoint URL	Icon
us-geo	s3.us.cloud-object-storage.appdomain.cloud	Copy icon
Dallas	s3.dal.us.cloud-object-storage.appdomain.cloud	Copy icon
Washington	s3.wdc.us.cloud-object-storage.appdomain.cloud	Copy icon
San Jose	s3.sjc.us.cloud-object-storage.appdomain.cloud	Copy icon

Legacy Endpoints

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### / Lab 3 - Build and Deploy Custom Function with Watson Machine Learning /

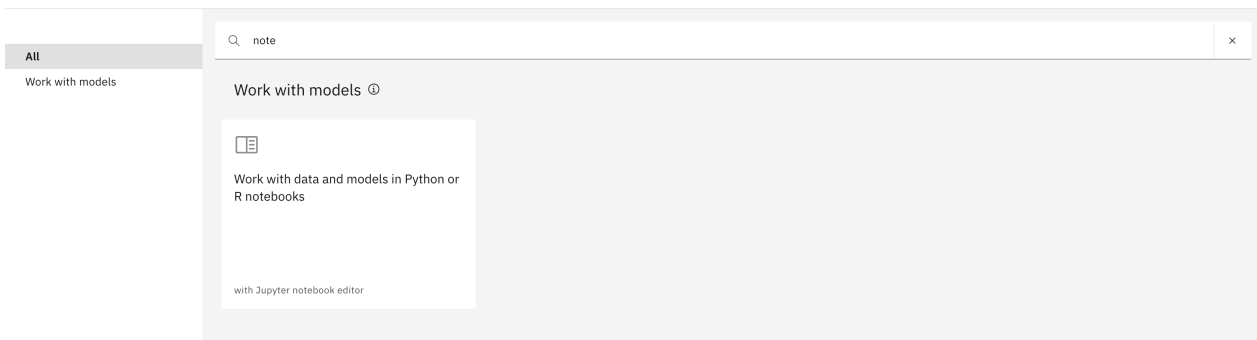
us-geo	s3.us.cloud-object-storage.appdomain.cloud	s3.private.us.cloud-object-storage.appdomain.cloud	s3.direct.us.cloud-object-storage.appdomain.cloud
Dallas	s3.dal.us.cloud-object-storage.appdomain.cloud	s3.private.dal.us.cloud-object-storage.appdomain.cloud	s3.direct.dal.us.cloud-object-storage.appdomain.cloud
Washington	s3.wdc.us.cloud-object-storage.appdomain.cloud	s3.private.wdc.us.cloud-object-storage.appdomain.cloud	s3.direct.wdc.us.cloud-object-storage.appdomain.cloud
San Jose	s3.sjc.us.cloud-object-storage.appdomain.cloud	s3.private.sjc.us.cloud-object-storage.appdomain.cloud	s3.direct.sjc.us.cloud-object-storage.appdomain.cloud
Legacy Endpoints			

## Build and deploy custom function in Jupyter Notebook

1. Download notebook used [here](#)
2. Click New Asset button --> type notebook in Search field --> select "Work with data and models in Python or R notebook"

What do you want to do?

Select a task based on your goal. You'll use a tool to create an asset for that goal.

The screenshot shows a dialog box titled 'What do you want to do?'. On the left is a sidebar with 'All' selected and 'Work with models' listed below it. The main area has a search bar with 'note' entered. Below the search bar, under the heading 'Work with models', there is a card titled 'Work with data and models in Python or R notebooks' which includes the text 'with Jupyter notebook editor'.

Category	Task
All	Work with data and models in Python or R notebooks

3. Select Local file in left section --> click Browse button and select notebook you already downloaded --> use default setting --> click Create button

### Work with data and models in Python or R notebooks

Define the details to create a notebook asset and open it in the Jupyter notebook editor tool.

+ New

Sample

**Local file**

URL

Define details

Local asset

QnA to dataframe-for participant.ipynb

Name

QnA to dataframe-for participant

Description (optional)

What's the purpose of this notebook

Define configuration

Select runtime

Runtime 24.1 on Python 3.11 XS (2 vCPU 8 GB RAM)

The selected runtime has 2 vCPU and 8 GB RAM. It consumes 1 capacity unit per hour. [Learn more](#) about capacity unit hours and watsonx.ai Studio pricing plans.

Cancel

Create

4. Fill your COS credentials in the notebook

Define connection to IBM Cloud Object Storage

```
In [ ]: cos_api_key=""
cos_endpoint_url=""
cos_bucket = ""
cos_object_key = ""
```

5. Fill your watsonx credentials in the notebook

```
In [ ]: watsonx_api_key=""
watsonx_project_id=""
watsonx_url=""
watsonx_space_id=""
model_id=""
```

6. Ask your instructor for next steps