MAXIMO PREDICT
HANDS-ON LAB

In this Exercise, you will learn how to setup Predict score for End of Life curve.

Important Note :
In this lab exercise, I'll be creating records using XX as prefix, Please make sure you replace the word XX with your initials during the lab.

Prerequisite

1) Ensure that you have completed the Maximo Monitor hands-on Lab
2) Ensure that you have completed the Maximo Health hands-on lab

   Note: Understanding & Availability of sensor data sets in Monitor application and asset data in Manage application is important.

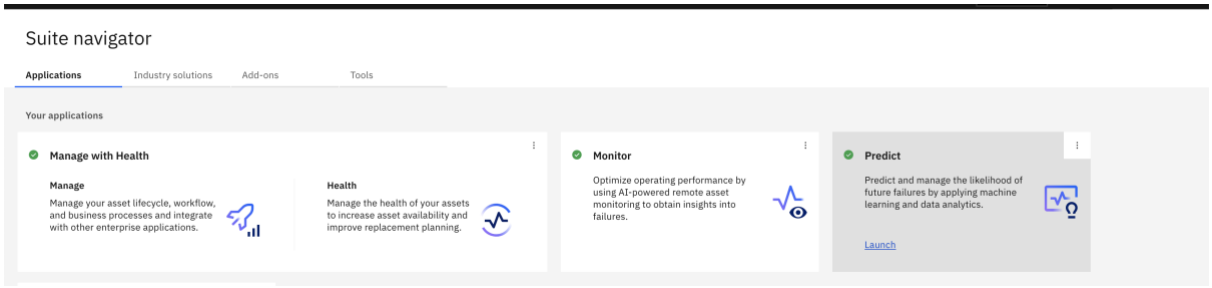
3) Predict_Envs.json
4) db2_certificate.pem
5) ca_public_cert.pem
6) Create your own user in CP4D to run predict models.

Setup Manage Application

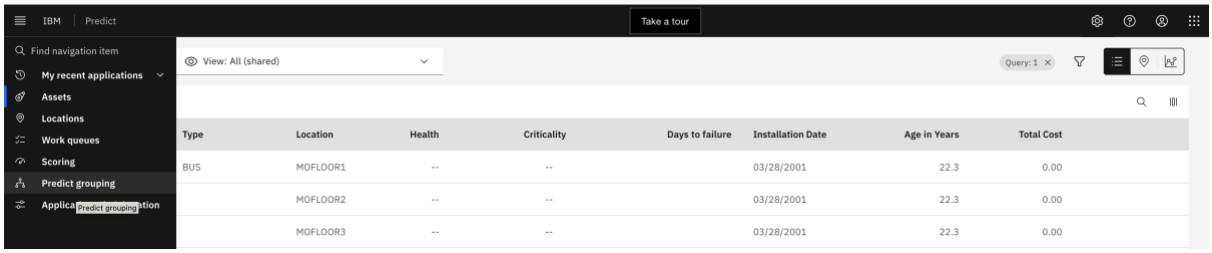
1) Open Manage application.
2) GO TO Assets application and filter the asset records created in Maximo Health lab exercise. E.g XX_ASSET%
3) Change the status of any two to three asset to "DECOMMISSIONED" e.g you can pick XX_ASSET2 and XX_ASSET4 and change the status from Active to DECOMMISSIONED.
4) Make sure you populate Installation Date, Expected life in years and Estimated EOL fields populated for each asset, without this Predict models will not execute.

Setup Predict Application

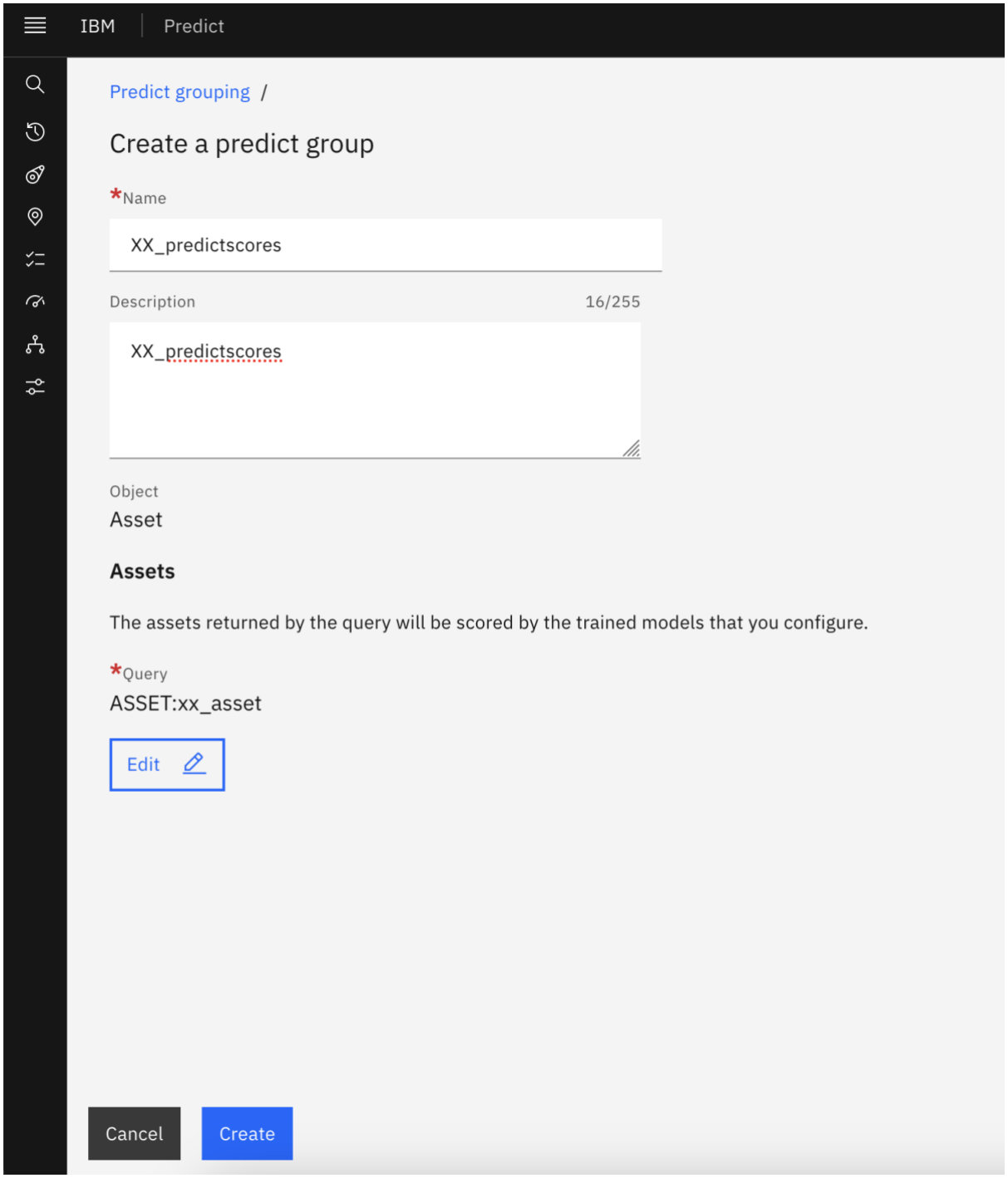
1) Open the Predict application from Suite Navigator



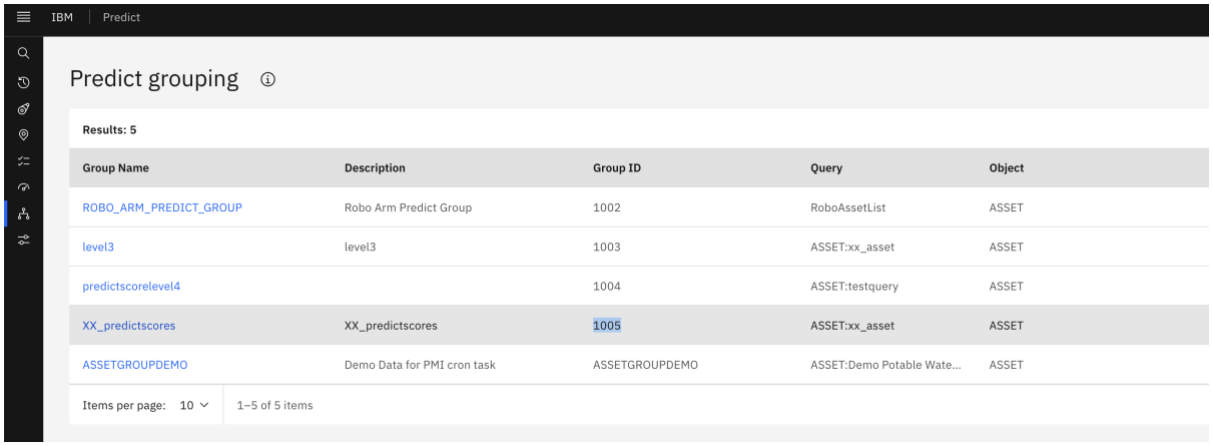
2) To create a Predict Group : Click on left menu and select -> Predict Grouping



3) Click on blue Create group + button to create a new group.
4) Provide the name and description as : XX_predictscores
5) Select the query you created in Manage application e.g xx_asset

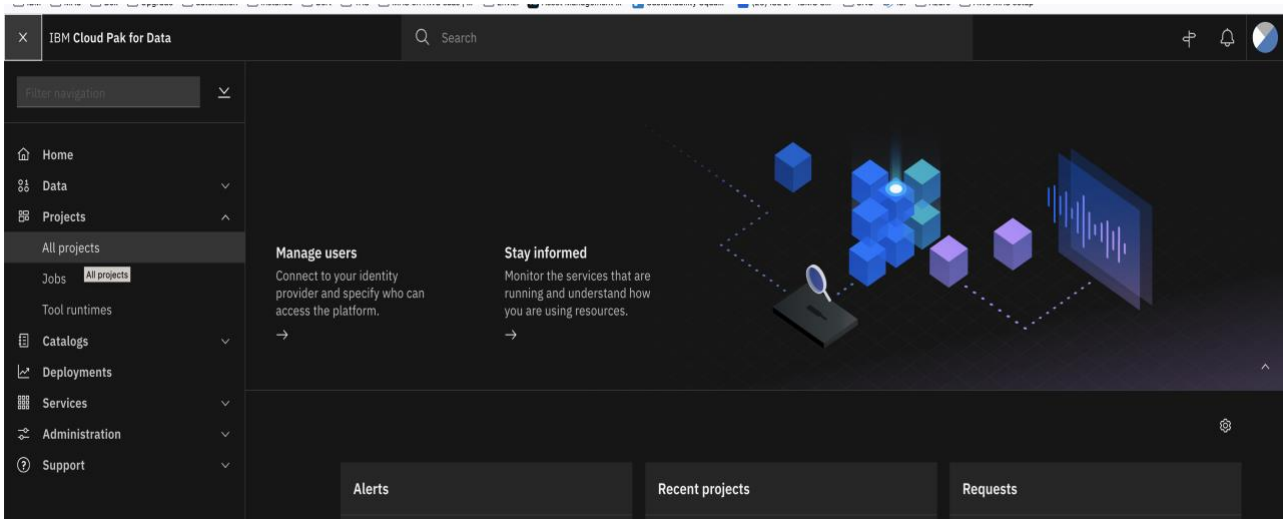


6) Click on Create button.
7) Verify the group has been created. And Note down the value for Group Id column. Here in below screenshot it is : 1005

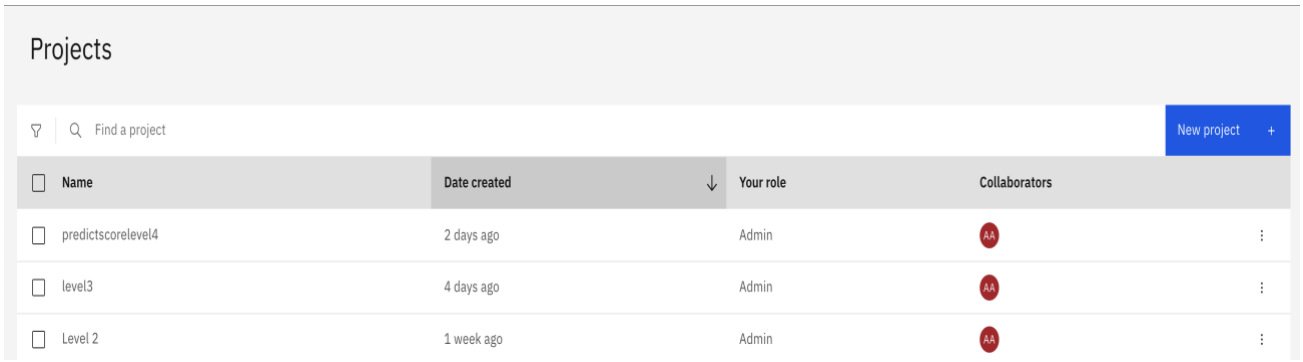


Setup Cloud Pak for Data

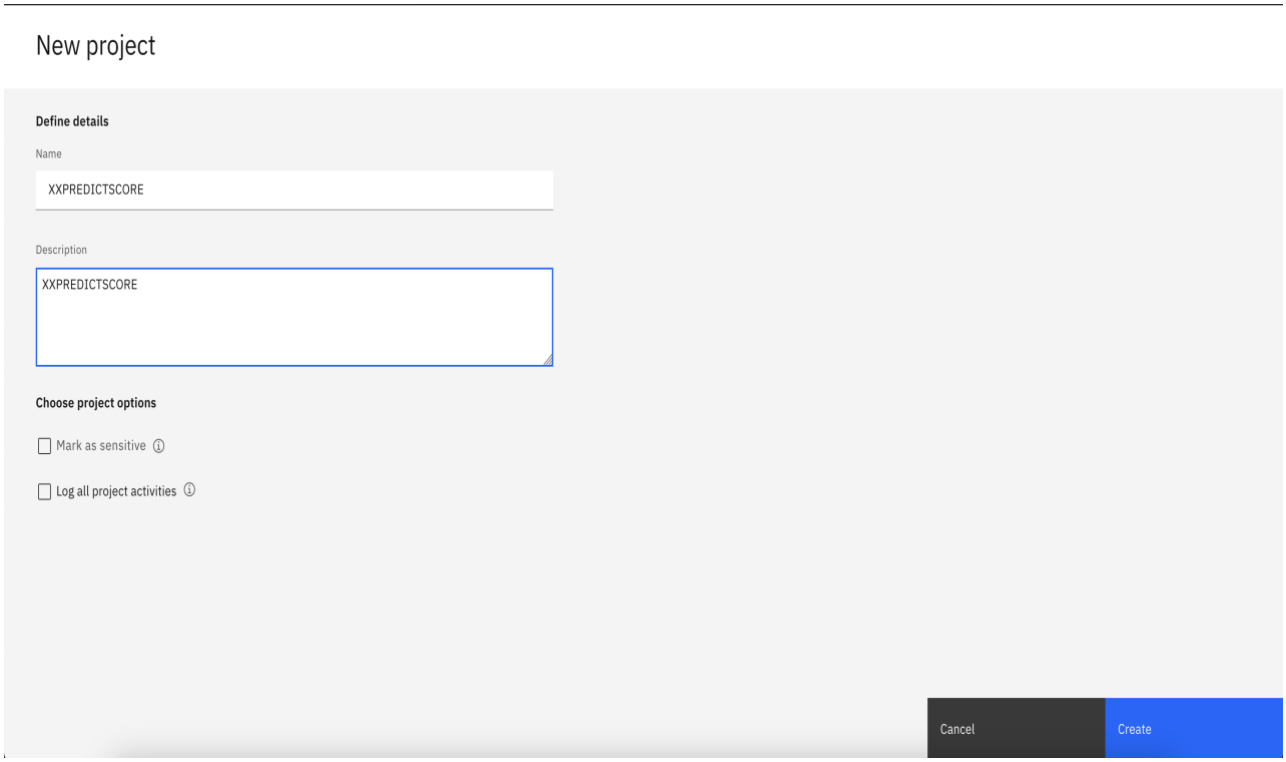
1) Take the CP4D url and credential from github : File name : hpsupport
2) Click on left hamburger menu and select All Projects



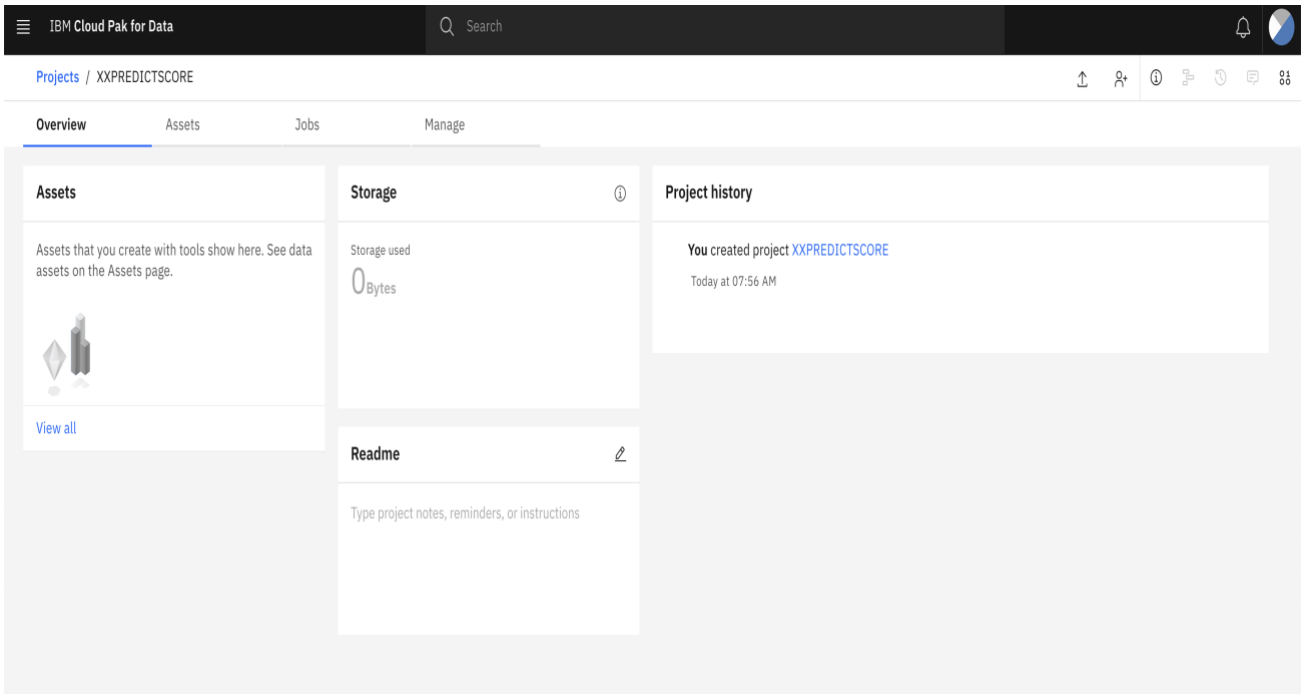
3) Click on blue button New Project + to create a new project.



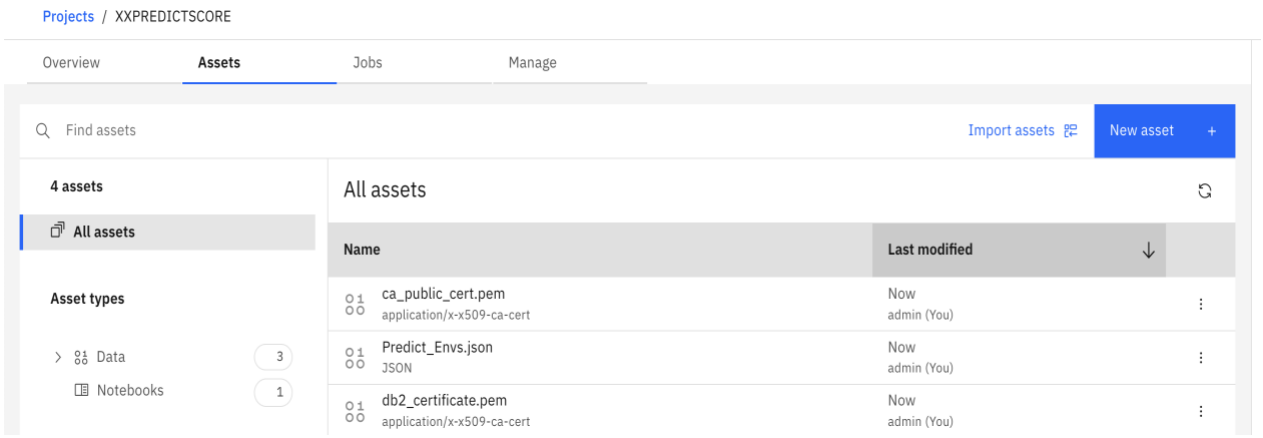
4) Choose Create an empty Project.
5) Enter project name and description as XXPREDICTSCORE



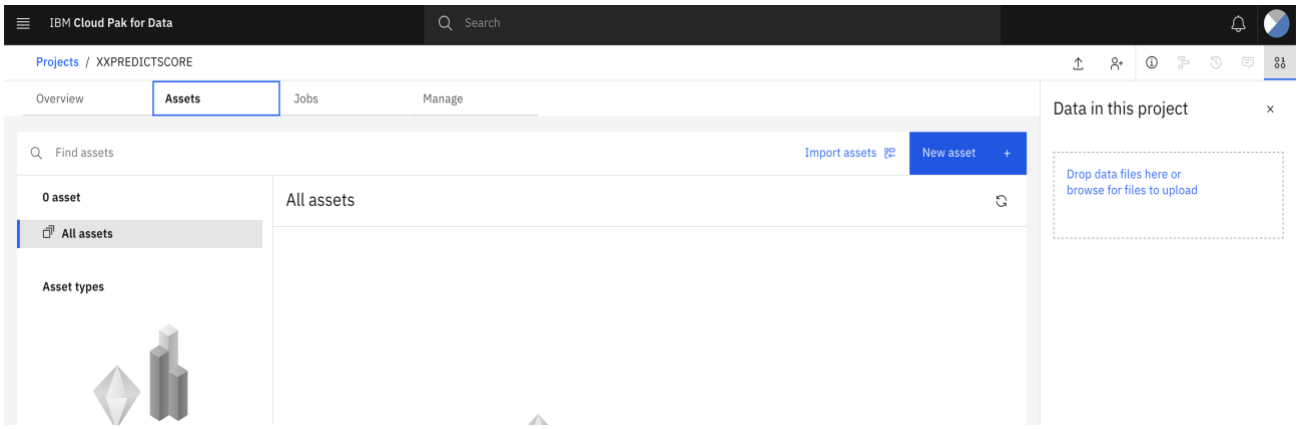
6) Click on Create button



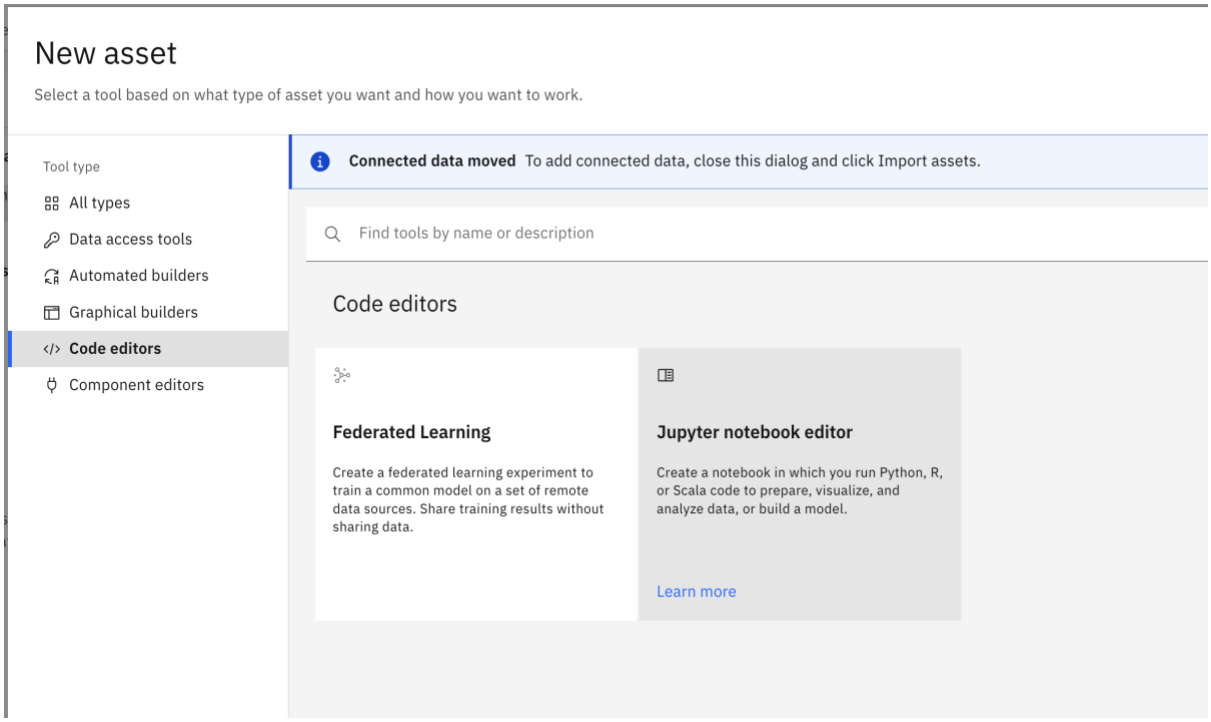
7) Select the Assets tab and Click on Drop data files section and select the below files, downloaded from github.
   - Predict_Envs.json
   - db2_certificate.pem
   - ca_public_cert.pem



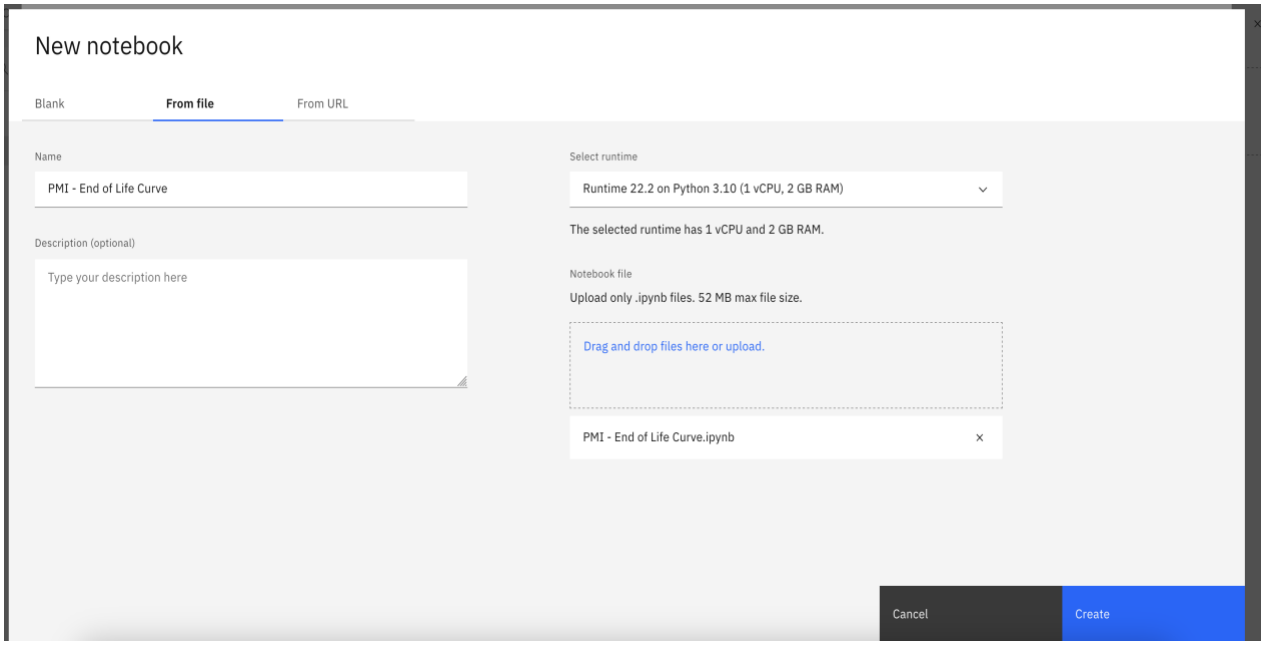
8) Select Assets tab and click on New Assets + button



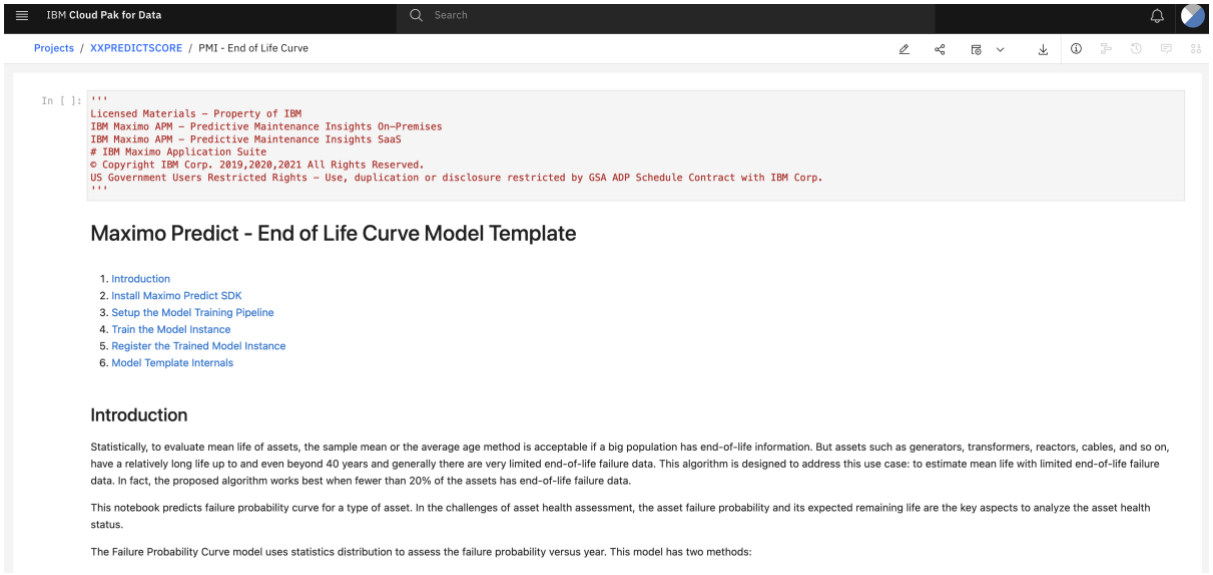
9) Select Code Editor and then choose Jupyter notebook editor



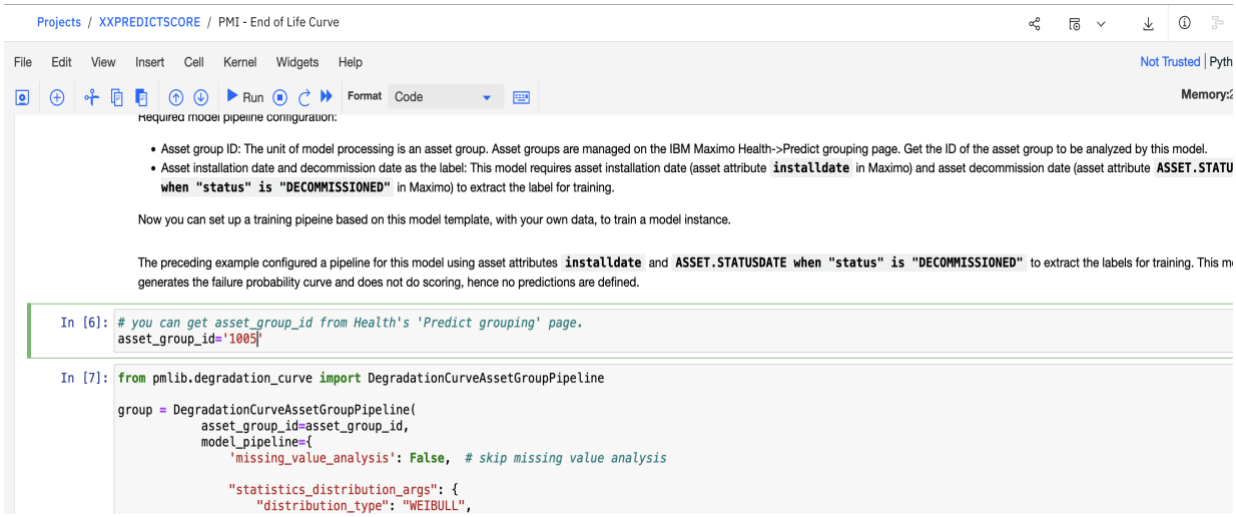
10) Click on From File tab and Drag and drop the PMI – End of life curve.ipynb file



11) Click on Create button. It opens the PMI – End of life cure notebook



12) Change the Asset group id from the predict application.



13) Select first cell and Click on the Run button. It executes each cell one after other.
14) Verify the output for Train the model instance. It should display – " `Finished execution of End of Life Curve Asset Group Pipeline.`" At the end.

15) Execute till Register the trained model instance cell.
16) The final outcome should display the message

`Registration was successful. New model ID = 20BB65D9-BA25-4173-95EC-A9E7E58DA5C7`

Register the trained model instance

If the trained model instance looks good, you can register it to Maximo Predict:

```
In [11]: group.register()
```

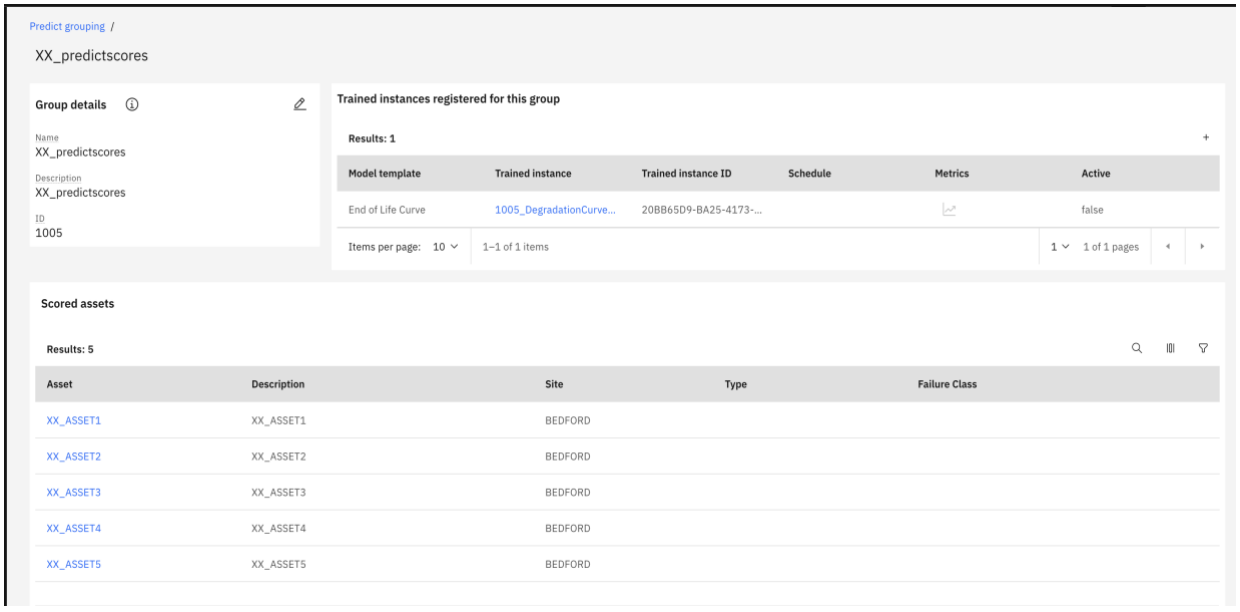
```
or': '1690685098'}}, 'output': {'names': []}, 'backtrack': {'days': 0, 'hours': 0, 'minutes': 0}}, 'granularity': [{'name': 'GroupDaily', 'description': 'GroupDaily',
'frequency': 'Daily', 'dataItems': [], 'entityFirst': False}, {'name': 'Hourly', 'description': 'Hourly', 'frequency': 'Hourly', 'dataItems': [], 'entityFirst': True},
{'name': 'GroupHourly', 'description': 'GroupHourly', 'frequency': 'Hourly', 'dataItems': [], 'entityFirst': False}, {'name': 'Minute', 'description': 'Minute summary
', 'frequency': 'Minute', 'dataItems': [], 'entityFirst': True}, {'name': 'GroupMinute', 'description': 'GroupMinute', 'frequency': 'Minute', 'dataItems': [], 'entityF
irst': False}], 'postProcessing': [], 'publishedOutputs': {}}, session=None, kwargs={}
2023-07-30T02:47:50.128 DEBUG::pmlib.util.api_request: Received API Response: resp.status_code=200, method=post, url=https://masocp-igki4x-predict-api.mas-masocp-igki4
x-predict.svc/ibm/pmi/service/rest/ds/inuqrvb39kbuvc4odt7ntmqr3n1of68ojjjt6o6t/1005/model?instanceId=masdev
2023-07-30T02:47:50.130 DEBUG::pmlib.degradation_curve.DegradationCurveAssetGroupPipeline.register: <Response [200]>
2023-07-30T02:47:50.131 DEBUG::pmlib.degradation_curve.DegradationCurveAssetGroupPipeline.register: Registed model instance with response: {'modelInstanceId': '20BB65D
9-BA25-4173-95EC-A9E7E58DA5C7', 'message': 'Created', 'status': 0}

2023-07-30T02:47:50.132 DEBUG::pmlib.degradation_curve.DegradationCurveAssetGroupPipeline.register: Registration succeeded. Writing initial prediction results...
2023-07-30T02:47:50.188 DEBUG::pmlib.degradation_curve.DegradationCurveAssetGroupPipeline._validate_checkpoint: entity_type=1005 with entity_type_id=14 does not have a
ny type-level checkpoint yet
2023-07-30T02:47:50.196 DEBUG::pmlib.degradation_curve.DegradationCurveAssetGroupPipeline._validate_checkpoint: entity_type=1005 with entity_type_id=14 type-level chec
kpoint inserted
2023-07-30T02:47:50.197 INFO::pmlib.degradation_curve.DegradationCurveAssetGroupPipeline.register: Registration was successful. New model ID = 20BB65D9-BA25-4173-95EC-
A9E7E58DA5C7
```

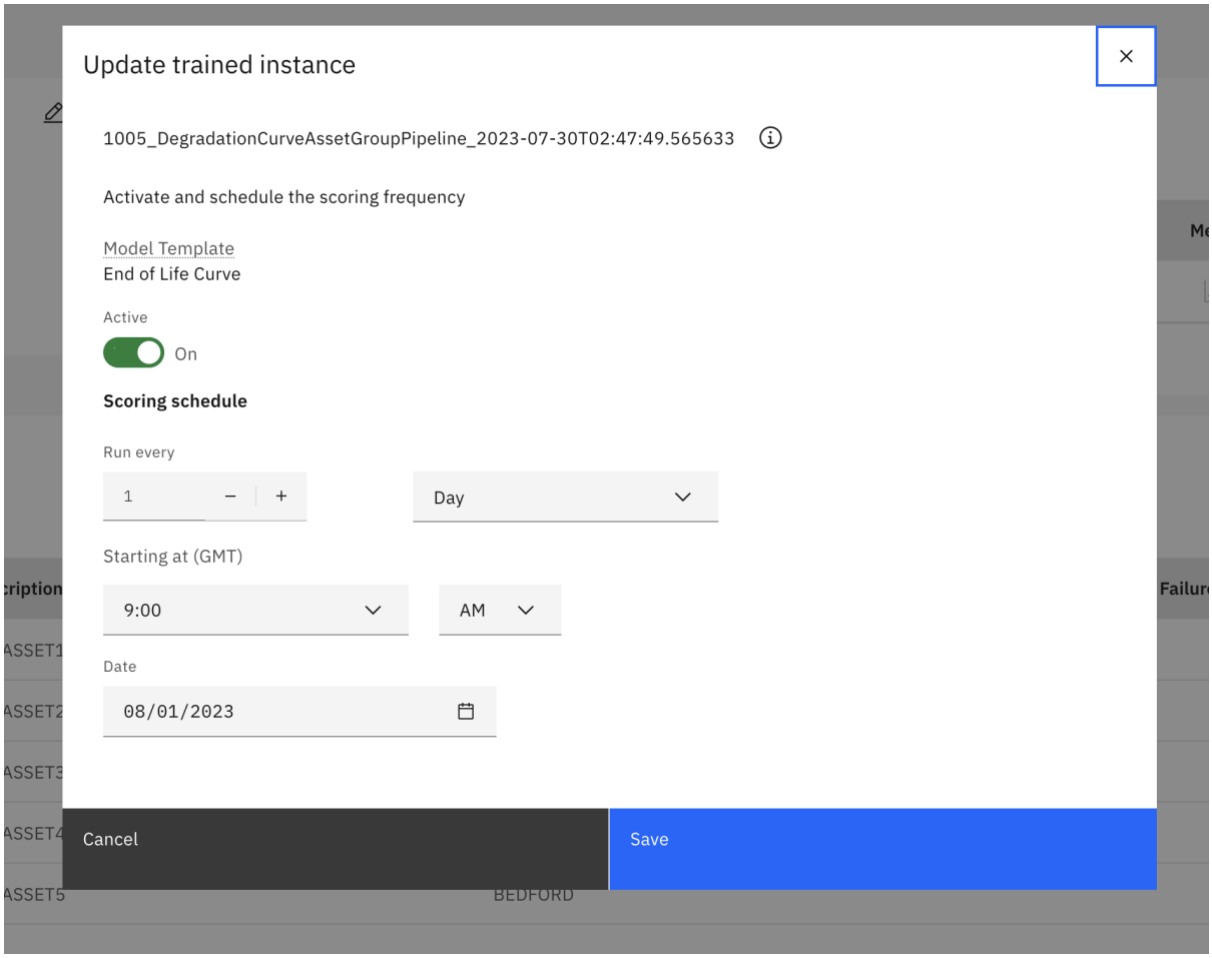
```
Out[11]: '20BB65D9-BA25-4173-95EC-A9E7E58DA5C7'
```

Verify the Scores

1) Go to Predict Application and open the Predict group created earlier.
2) Click on the Trained Instance model link

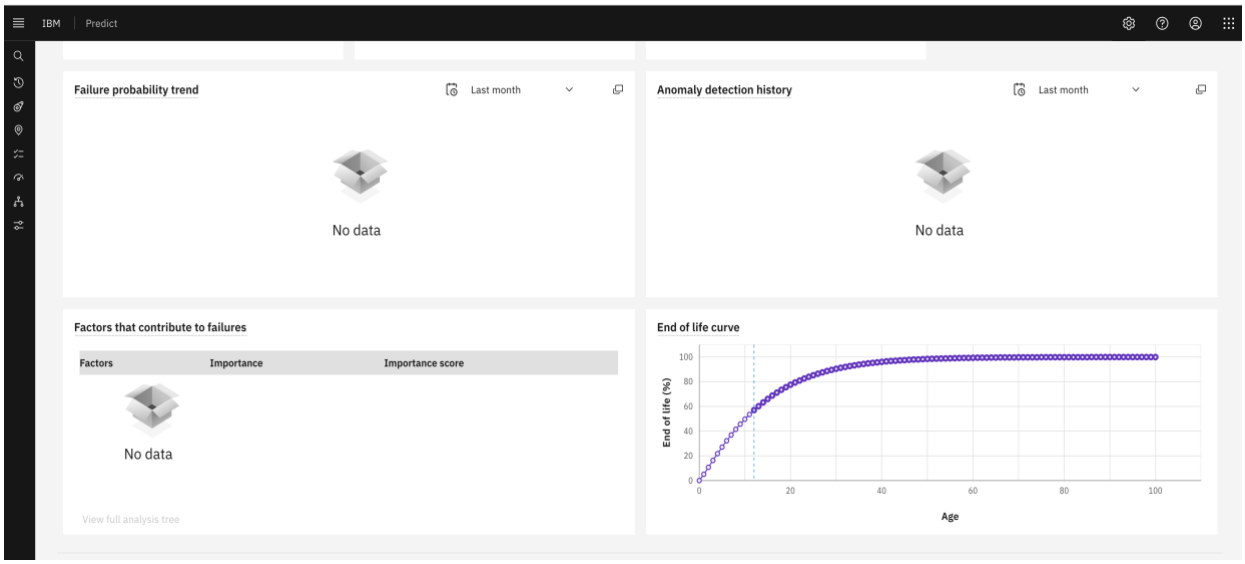


3) Choose options as below
   Active : ON
   Run every : 1 Day
   Starting At : 9 AM
   Date : Enter future date



4) Click on Save

5) Open any asset in the list and verify that End of life curve is populated.



Congratulations !!
You have successfully completed the Maximo Predict Lab

Document History

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