

(Optional) Hands-on Lab: Create IBM Cloud account and Watson Studio instance

Estimated time needed: 40 minutes

In this lab you will explore Watson Studio

Objectives -

After completing this lab, you will be able to:

- Use Watson Studio service
- Create project in Watson Studio
- Add an interactive python notebook to a project in Watson Studio

Pre-requisite

You need an IBM Cloud account to create a project in Watson Studio. If you don't have an account created already, click and open this [link](#) and follow the instructions, to create an IBM Cloud account.

Exercise - Create a project on Watson Studio

If you have not created a Watson service before proceed with Task 1, otherwise go to Task 2

Task 1: For New Users (with no Watson service):

1. [Click here](#) to go to the IBM Cloud Watson Studio page. To create a Watson service, choose a plan you want to use, click **Create**. In the image below, the *Lite* plan has been chosen.


IBM Cloud

Search resources and offerings...

Catalog Docs Support Manage

Lavanya Sunde...

Catalog / Services /

 Watson Studio

Author: IBM • Date of last update: 12/06/2020 • Docs

Create

About

Select a region

Select a region

Dallas

Select a pricing plan

Displayed prices do not include tax. Monthly prices shown are for country or region: [United States](#)

Plan	Features	Pricing
Lite	<div>1 authorized user</div> <div>50 capacity unit-hours monthly limit</div> <div>Environment = # of capacity units required per hour</div> <div>• 1 vCPU + 4 GB RAM = 0.5</div> <div>• 2 vCPU + 8 GB RAM = 1</div> <div>• 4 vCPU + 16 GB RAM = 2</div> <div>• Decision Optimization = Environment + 5</div>	Free

The Lite plan for Watson Studio offers everything you need to become a better data scientist or domain expert in a collaborative environment.

Lite plan services are deleted after 30 days of inactivity.

Summary

Watson Studio

Free

Region: Dallas

Plan: Lite

Service name: Watson Studio-qo

Resource group: Default

Create

Add to estimate

View terms

FEEDBACK

2. On the Watson Studio page, click on **Launch in IBM Cloud Pak for Data**.

Resource list /

Watson Studio-c6

Active


Add tags

Details

Actions...

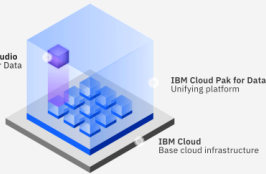
Manage

Plan

 Watson Studio in Cloud Pak for Data

Watson Studio is one of the core services in Cloud Pak for Data as a Service. Build, deploy and manage AI models, and optimize decisions on IBM Cloud Pak for Data.

Launch in IBM Cloud Pak for Data



IBM Watson Studio in Cloud Pak for Data

IBM Cloud Pak for Data Unifying platform

IBM Cloud Base cloud infrastructure

IBM Watson Studio is part of IBM Cloud Pak for Data and serves as the data science capability of the data fabric architecture.

Helpful links

Documentation

Learn about tools, features, and how to perform a wide variety of Data and AI tasks.

Learning path

Start a step-by-step tutorial to get up and running quickly.

Videos

Watch videos to learn about Watson Studio and Cloud Pak for Data as a Service.

Task 2: For Existing Users (who already have Watson Service):

1. Go to the IBM Cloud Dashboard and click Services.

IBM Cloud

Search resources and offerings...

Q

Catalog

Docs

Support

Manage

Lavanya Sunde...

Dashboard

Upgrade account

Create resource

Resource summary

6

Resources

Services

Storage

View all (2)...

Planned maintenance

View all

Clear skies!

You can view your scheduled maintenance events here.

For you

Get started with using AI and Cloud Object Storage in 15 minutes.

Get Started with Watson Studio

Watson Assistant lets you build conversational interfaces into any application, device, or channel.

Use Watson Assistant

Refresh

News

View all

Coca-Cola European Partners Signs a Multiyear Agreement with IBM to Accelerate its Strategic Transformation Journey with...

Daimler Expands Relationship with IBM; Adopts IBM public cloud for its security capabilities

Wipro and IBM Collaborate to Help Clients

Recent support cases

View all

User access

Manage users

Enter email addresses below to jump directly into the invite user setup:

Enter up to 100 email addresses

IBM Cloud status

View all

https://cloud.ibm.com/resources?groups=resource-instance

2. When you click on Services, all your existing services will be shown in the list. Click the Watson Studio service you created:

IBM Cloud

Search resources and offerings...

Q

Catalog

Docs

Support

Manage

Lavanya Sunde...

Resource list

Create resource

Name	Group	Location	Offering	Status	Tags
Filter by name or IP address...					
Filter by group or org...					
Filter...					
Q Filter...					
Q Filter...					
Filter...					
Devices (0)					
VPC infrastructure (0)					
Clusters (0)					
Cloud Foundry apps (0)					
Cloud Foundry services (0)					
Services (5)					
Analytics Engine-8h	Default	London	Analytics Engine	Active	—
Discovery-h0	Default	Dallas	Discovery	Active	—
Machine Learning-6r	Default	Dallas	Machine Learning	Active	—
Visual Recognition-wm	Default	Dallas	Visual Recognition	Active	—
Watson Studio-q0	Default	Dallas	Watson Studio	Active	—
Storage (1)					
Network (0)					
Cloud Foundry enterprise environments (0)					

3. On the Watson Studio page, click on Launch in IBM Cloud Pak for Data.

Resource list /

Watson Studio-c6

Active

Add tags

Details

Actions...

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Watson Studio in Cloud Pak for Data

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Documentation

Learn about tools, features, and how to perform a wide variety of Data and AI tasks.

Learning path

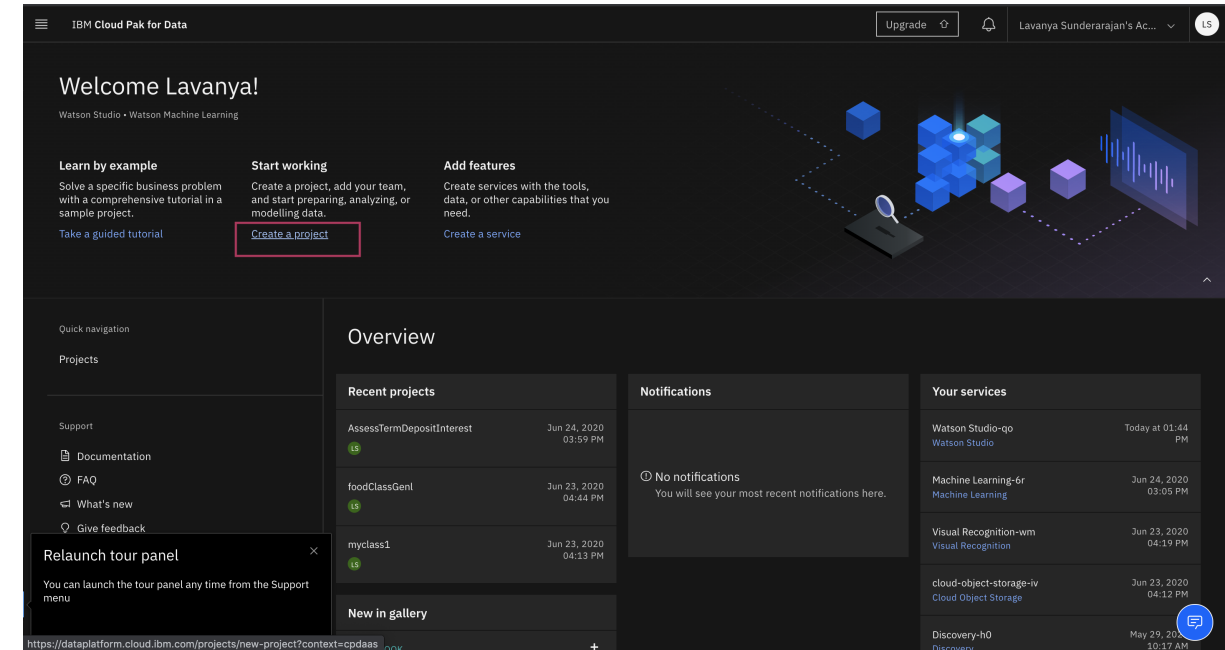
Start a step-by-step tutorial to get up and running quickly.

Videos

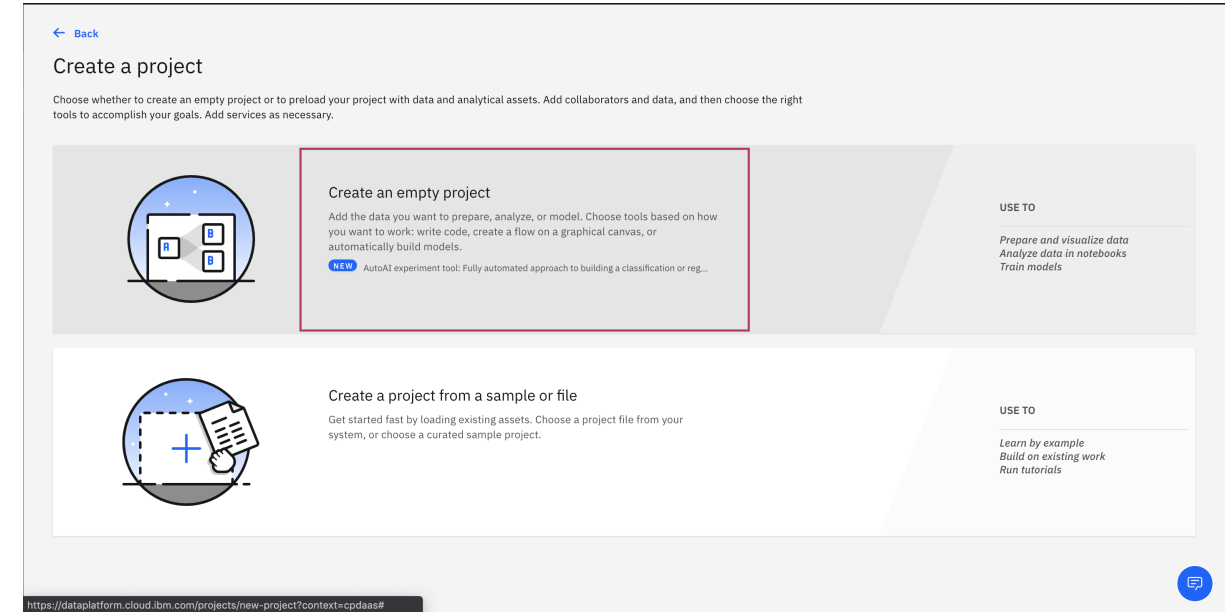
Watch videos to learn about Watson Studio and Cloud Pak for Data as a Service.

Task 3: Creating a Project

1. Click on Create a project



2. On the Create a project page, click Create an empty project



3. Provide a Project Name and Description, as shown below:

New project

Define project details

Name

Python Basics for Data Science Project

Description

This is the Python Basics for Data Science Project.

Choose project options

☐ Restrict who can be a collaborator ⓘ

Project will include integration with [Cloud Object Storage](#) for storing project assets.

Define storage

① Select storage service

Add

Add an object storage instance and then return to this page and click Refresh.

② Refresh

Cancel

Create

4. You must also create storage for the project. Click **Add**

New project

Define project details

Name

Project name

Description

Project description

Choose project options

☐ Restrict who can be a collaborator ⓘ

Project will include integration with [Cloud Object Storage](#) for storing project assets.

Define storage

① Select storage service

Add

Add an object storage instance and then return to this page and click Refresh.

② Refresh

Cancel

Create

5. On the Cloud Object Storage page, scroll down and then click **Create**.

about:blank

5/10

IBM Watson Studio

Upgrade

IBM Watson Account

Cloud Object Storage

ExistingNew

Cloud Object Storage

IBM Cloud Object Storage is a highly scalable cloud storage service, designed for high durability, resiliency and security. Store, manage and access your data via our self-service portal and RESTful APIs. Connect applications directly to Cloud Object Storage use other IBM Cloud Services with your data.

Features

Storage for the IBM Cloud

IBM Cloud Object Storage provides unstructured data storage for cloud applications. Libraries and SDKs support a common set of S3 API functions for connecting new applications to scalable cloud storage and integrating your data into other services on the IBM Cloud Platform as well as IBM Watson services. IBM Cloud Object Storage is available with Regional, Cross Region and single site resiliency options worldwide.

Built-in Aspera high-speed transfer

With IBM Cloud Object Storage Aspera high-speed data transfer, you can improve data transfer performance by quickly transferring data over long distances, and under various network conditions. It is natively integrated into Cloud Object Storage and there is no additional cost for uploading data.

Storage Classes and Archive Policy

Choose storage classes based on your usage patterns for active, less-active, and cold workloads with Standard, Vault, and Cold Vault respectively. Use Flex class for dynamic data access with usage patterns that are hard to predict. For rarely used data that requires long-term retention, simply set an Archive policy with our existing storage-class tiers allowing you to reduce costs even further with our lowest priced Archive storage.

Access and Key Management

IBM Identity and Access Management (IAM) policies allow for granular access control at the bucket level using role-based policies. Key Protect support allows customers to have their own managed encryption keys for higher level data security.

Pricing Plan: Monthly Process shown above reflect the: United States

PLAN	FEATURES	PRICING
<div><div><div>Lite</div></div></div>	<div><div>1 COS Service Instance</div><div>Storage up to 25 GB/mo.</div><div>Up to 20,000 GET requests/mo.</div><div>Up to 2,000 PUT requests/mo.</div><div>Up to Data Retrieval 10 GB/mo.</div><div>Up to 5GB Public Outbound</div><div>Applies to aggregate total across all storage bucket classes</div></div>	<div>Free</div>

Standard

There is no minimum fee, so you pay only for what you use.

Expand each section to view details

Cancel

Create

6. In the Confirm Creation box, click **Confirm**.

about:blank

6/10



Confirm Creation

Plan

Lite ▼

Resource group

Default ▼

Service name

cloud-object-storage-ai

Cancel

Confirm

7. On the New project page, note that the storage has been added, and then click Create.

IBM Watson Studio

Upgrade

IBM Watson Account

New project

Define project details

Name

Python Basics for Data Science Project

Description

This is the Python Basics for Data Science Project.

Choose project options

☐ Restrict who can be a collaborator

Project will include integration with Cloud Object Storage for storing project assets.

Storage

cloud-object-storage-tc

Cancel

Create

Task4: Adding a Notebook to the Project:

- 1. You need to add a Notebook to your project. Click on **Assets > New asset**.

Projects / IBM_Project

Assets

Jobs

Manage

Launch IDE

Click here to add a Data set

Find assets

Add asset

New asset

0 asset

All assets

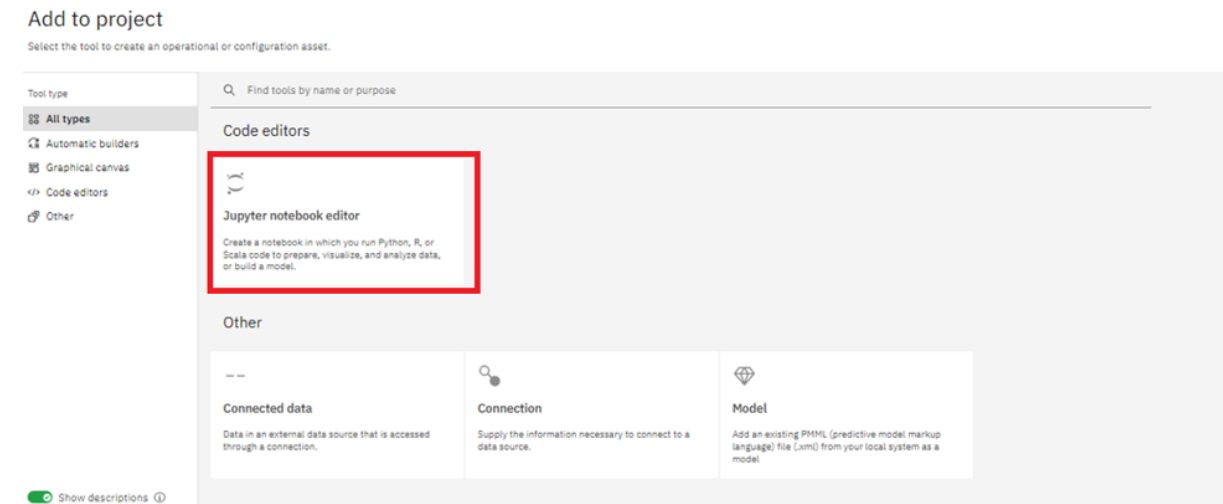
Asset types

All assets

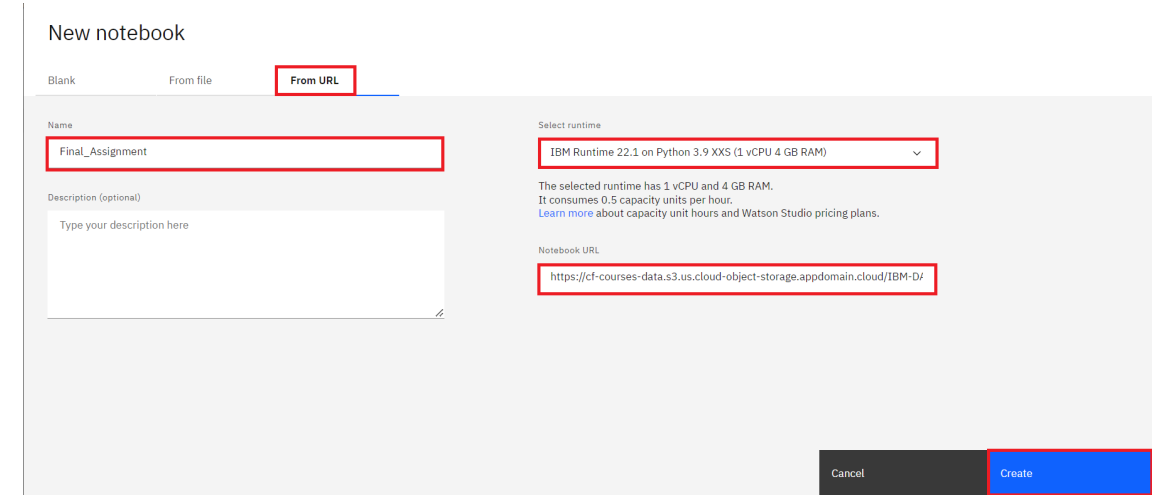
Start adding assets

To get started with project assets, click **New asset** to create them, or **Add asset** to add existing ones.

- 2. Scroll down and select **Jupyter Notebook Editor**:



3. On the New Notebook page, enter a name for the notebook, and then click **From URL**. Copy this [link](#).
4. Paste it into the **Notebook URL** box, and then click **Create Notebook**.



You will see this Notebook:



Introduction to Pandas in Python

Estaimted time needed: 15 minutes

Objectives

After compiling this lab you will be able to:

- Use Pandas to access and view data

Table of Contents

- [About the Dataset](#)
- [Introduction of Pandas](#)
- [Viewing Data and Accessing Data](#)
- [Quiz on DataFrame](#)

Estimated time needed: 15 min

Author(s)

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Other Contributor(s)

Lavanya

Changelog

Date	Version	Changed by	Change Description
2023-05-10	2.4	Eric Hao & Vladislav Boyko	Updated Page Frames
2022-04-04	2.3	Malika	Updated screenshot
2022-02-22	2.2	Hema	Updated screenshots
2020-11-18	2.1	Malika Singla	Updated the screenshot
2020-08-25	2.0	Lavanya	Migrated Lab to Markdown and added to course repo in GitLab

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