

Skills Network

(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.

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	1 authorized user 50 capacity unit-hours monthly limit Environment = # of capacity units required per hour • 1 vCPU + 4 GB RAM = 0.5 • 2 vCPU + 8 GB RAM = 1 • 4 vCPU + 16 GB RAM = 2 • Decision Optimization = Environment + 5 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.	Free

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.

The screenshot shows the IBM Cloud Dashboard. The top navigation bar includes the IBM Cloud logo, a search bar, and links to Catalog, Docs, Support, Manage, and a user profile. The dashboard features several tiles: 'Resource summary' showing 6 resources with 'Services' highlighted; 'Planned maintenance' with a 'View all' link; 'For you' with recommendations like 'Get started with using AI and Cloud Object Storage'; 'News' with articles about Coca-Cola, Daimler, and Wipro; 'Recent support cases'; 'User access' with a 'Manage users' link; and 'IBM Cloud status' with a 'View all' link. A 'Create resource' button is in the top right.

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

The screenshot shows the 'Resource list' page in IBM Cloud. It features a table with columns: Name, Group, Location, Offering, Status, and Tags. The table lists various resources, including 'Analytics Engine-8h', 'Discovery-h0', 'Machine Learning-6r', 'Visual Recognition-wm', and 'Watson Studio-qo'. The 'Watson Studio-qo' row is highlighted with a red box. The table also shows counts for each category (e.g., 5 Services, 1 Storage).

Name	Group	Location	Offering	Status	Tags
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-qo	Default	Dallas	Watson Studio	Active	—

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...

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](#)

Helpful links

Documentation

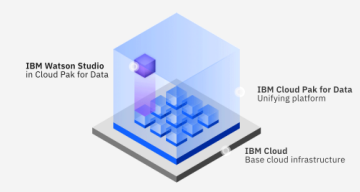
Learn about tools, features, and how to perform a wide variety of Data and AI tasks.

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



IBM Watson Studio in Cloud Pak for Data

IBM Cloud Pak for Data Unifying platform

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

Task 3: Creating a Project

1. Click on Create a project

IBM Cloud Pak for Data

Upgrade

Lavanya Sunderarajan's Ac... LS

Welcome Lavanya!

Watson Studio • Watson Machine Learning

Learn by example

Solve a specific business problem with a comprehensive tutorial in a sample project.

[Take a guided tutorial](#)

Start working

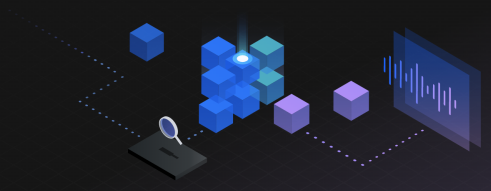
Create a project, add your team, and start preparing, analyzing, or modelling data.

[Create a project](#)

Add features

Create services with the tools, data, or other capabilities that you need.

[Create a service](#)



Quick navigation

Projects

Support

Documentation

FAQ

What's new

Give feedback

Relaunch tour panel

You can launch the tour panel any time from the Support menu

Overview

Recent projects

Project Name	Created
AssessTermDepositInterest	Jun 24, 2020 03:59 PM
foodClassGenI	Jun 23, 2020 04:44 PM
myclass1	Jun 23, 2020 04:13 PM

New in gallery

Notifications

No notifications

You will see your most recent notifications here.

Your services


Service Name	Created
Watson Studio-go	Today at 01:44 PM
Machine Learning-6r	Jun 24, 2020 03:05 PM
Visual Recognition-wm	Jun 23, 2020 04:19 PM
cloud-object-storage-iv	Jun 23, 2020 04:12 PM
Discovery-h0	May 29, 2020 10:17 AM

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

[← Back](#)

Create a project

Choose whether to create an empty project or to preload your project with data and analytical assets. Add collaborators and data, and then choose the right tools to accomplish your goals. Add services as necessary.




Create an empty project

Add the data you want to prepare, analyze, or model. Choose tools based on how you want to work: write code, create a flow on a graphical canvas, or automatically build models.

NEW AutoAI experiment tool: Fully automated approach to building a classification or reg...

USE TO

- Prepare and visualize data
- Analyze data in notebooks
- Train models



Create a project from a sample or file

Get started fast by loading existing assets. Choose a project file from your system, or choose a curated sample project.

USE TO

- Learn by example
- Build on existing work
- Run tutorials

<https://dataplatform.cloud.ibm.com/projects/new-project?context=cpdaas#>

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**.

IBM Watson Studio

Upgrade

IBM Watson Studio

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 Prices shown above reflect the: United States

PLAN	FEATURES	PRICING
<div><input checked="" type="radio"/> Lite</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>	Free
<div><input type="radio"/> Standard</div>	<div>There is no minimum fee, so you pay only for what you use.</div>	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

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.

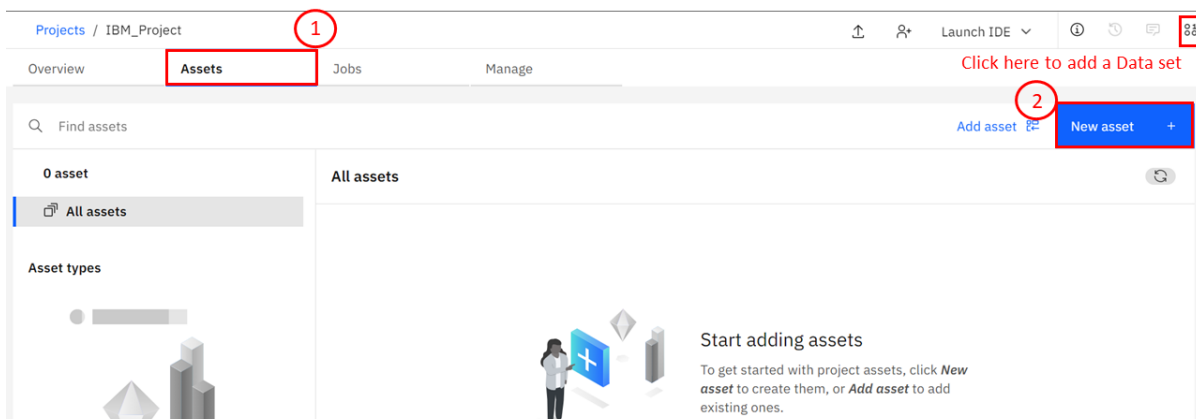
Storage

cloud-object-storage-tc

Cancel Create

Task4: Adding a Notebook to the Project:

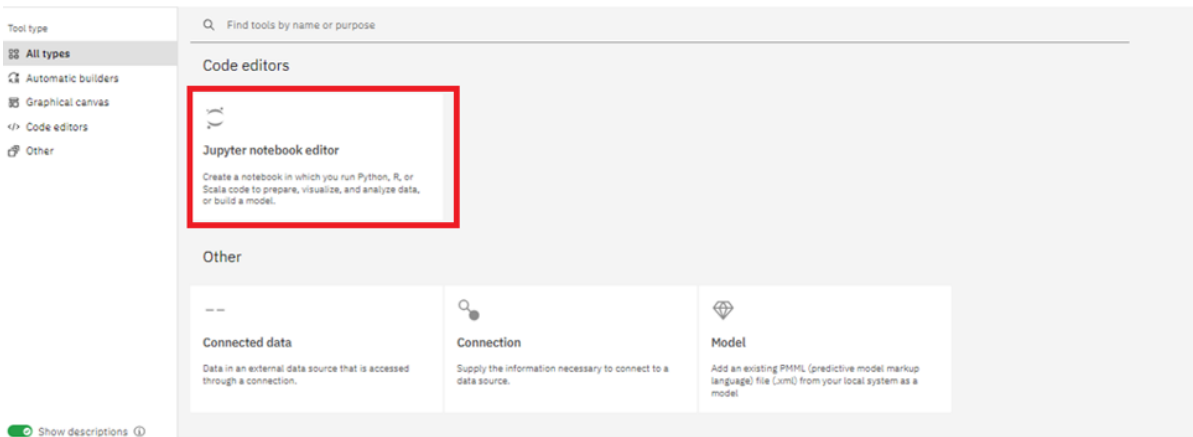
1. You need to add a Notebook to your project. Click on **Assets > New asset**.



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

Add to project

Select the tool to create an operational or configuration asset.



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**.

New notebook

Blank From file **From URL**

Name
Final_Assignment

Description (optional)
Type your description here

Select runtime
IBM Runtime 22.1 on Python 3.9 XXS (1 vCPU 4 GB RAM)

The selected runtime has 1 vCPU and 4 GB RAM.
It consumes 0.5 capacity units per hour.
[Learn more](#) about capacity unit hours and Watson Studio pricing plans.

Notebook URL
<https://cf-courses-data.s3.us.cloud-object-storage.appdomain.cloud/IBM-D/>

Cancel Create

You will see this Notebook:



Introduction to Pandas in Python

Estaimted time needed: 15 minutes

Objectives

After complitng 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

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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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