

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

## Step 1: For New Users (with no Watson service):

For this project, you will use your IBM Watson Studio account from the previous chapter.

Go to the IBM Cloud Watson Studio page:

[Click here](#)

You will see the screen in the figure below. Click the icon in the red box:

The screenshot shows the IBM Cloud Watson Studio pricing page. The top navigation bar includes 'IBM Cloud', a search bar, and links for 'Catalog', 'Docs', 'Support', and 'Manage'. Below the navigation bar, the page title is 'Watson Studio' with tabs for 'Lite', 'IBM', 'Service', and 'IAM-enabled'. The 'Lite' tab is selected. The page content includes a 'Select a region' dropdown set to 'Dallas' and a 'Select a pricing plan' section. The pricing table has three columns: PLAN, FEATURES, and PRICING. The 'Lite' plan is highlighted with a blue checkmark and is marked as 'Free'. The 'Standard v1' plan is priced at \$99.00 USD/Instance and \$0.50 USD/Capacity Unit-Hour. The 'Enterprise v2' plan is priced at \$99.00 USD/Authorized User and \$0.50 USD/Capacity Unit-Hour. A red box highlights the 'Create' button in the top right corner of the page.

PLAN	FEATURES	PRICING
✓ Lite	<b>1 authorized user</b> 50 capacity unit-hours monthly limit 1 free small compute environment with 1 vCPU and 4 GB RAM (does not require capacity unit-hours)  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
Standard v1	<b>1 authorized user + unlimited viewer collaborators</b> 50 capacity unit-hours included monthly (additional capacity available) Unlimited elastic compute environments Capacity Type: 1 vCPU and 4 GB RAM = 0.5 capacity units required per hour Capacity Type: 2 vCPU and 8 GB RAM = 1 capacity units required per hour Capacity Type: 3 vCPU and 12 GB RAM = 1.5 capacity units required per hour Capacity Type: 4 vCPU and 16 GB RAM = 2 capacity units required per hour Capacity Type: 8 vCPU and 32 GB RAM = 4 capacity units required per hour Capacity Type: 16 vCPU and 64 GB RAM = 8 capacity units required per hour Decision Optimization = (Capacity Type) * 20 capacity units required per hour	\$99.00 USD/Instance \$0.50 USD/Capacity Unit-Hour \$99.00 USD/Authorized User
Enterprise v2	<b>5 authorized users + unlimited viewer collaborators</b> 5,000 capacity unit-hours included monthly (additional capacity available) Unlimited elastic compute environments Capacity Type: 1 vCPU and 4 GB RAM = 0.5 capacity units required per hour Capacity Type: 2 vCPU and 8 GB RAM = 1 capacity units required per hour Capacity Type: 3 vCPU and 12 GB RAM = 1.5 capacity units required per hour Capacity Type: 4 vCPU and 16 GB RAM = 2 capacity units required per hour Capacity Type: 8 vCPU and 32 GB RAM = 4 capacity units required per hour Capacity Type: 16 vCPU and 64 GB RAM = 8 capacity units required per hour Decision Optimization = (Capacity Type) * 20 capacity units required per hour HDMA readiness option available in Dallas Multi-Tiered	Expand each section to view details

Then click **Watson**, as shown below:

IBM Cloud

Search resources and offerings...

Need Help? [Contact Support](#) [View docs](#)

Summary

**Watson Studio** Free

Region: Dallas  
Plan: Lite  
Service name: Watson Studio-jr  
Resource group: Default

[Create](#)

[Add to estimate](#)

[View terms](#)

Monthly prices shown are for country or region: [United States](#)

PLAN	FEATURES	PRICING
<b>Lite</b>	<b>1 authorized user</b> 50 capacity unit-hours monthly limit 1 free small compute environment with 1 vCPU and 4 GB RAM (does not require capacity unit-hours)	Free
<b>Standard v1</b>	<b>1 authorized user + unlimited viewer collaborators</b> 50 capacity unit-hours included monthly (additional capacity available) Unlimited elastic compute environments Capacity Type: 1 vCPU and 4 GB RAM = 0.5 capacity units required per hour Capacity Type: 2 vCPU and 8 GB RAM = 1 capacity units required per hour Capacity Type: 3 vCPU and 12 GB RAM = 1.5 capacity units required per hour Capacity Type: 4 vCPU and 16 GB RAM = 2 capacity units required per hour Capacity Type: 8 vCPU and 32 GB RAM = 4 capacity units required per hour Capacity Type: 16 vCPU and 64 GB RAM = 8 capacity units required per hour Decision Optimization = (Capacity Type) * 20 capacity units required per hour HIPAA readiness option available in Dallas Multi-Tiered	\$99.00 USD/Instance \$0.50 USD/Capacity Unit-Hour \$99.00 USD/Authorized User
<b>Enterprise v2</b>	<b>5 authorized users + unlimited viewer collaborators</b> 5,000 capacity unit-hours included monthly (additional capacity available) Unlimited elastic compute environments Capacity Type: 1 vCPU and 4 GB RAM = 0.5 capacity units required per hour Capacity Type: 2 vCPU and 8 GB RAM = 1 capacity units required per hour Capacity Type: 3 vCPU and 12 GB RAM = 1.5 capacity units required per hour Capacity Type: 4 vCPU and 16 GB RAM = 2 capacity units required per hour Capacity Type: 8 vCPU and 32 GB RAM = 4 capacity units required per hour Capacity Type: 16 vCPU and 64 GB RAM = 8 capacity units required per hour Decision Optimization = (Capacity Type) * 20 capacity units required per hour HIPAA readiness option available in Dallas Multi-Tiered	Expand each section to view details

Then click **Browse Services**.

IBM Cloud

Search resources and offerings...

Build with Watson

The AI platform for business

**Build a chatbot**  
Create a chatbot to interact with your customers.  
[Get Started](#)

**Extract insights**  
Query the news to understand hot topics, sentiment and more.  
[Get Started](#)

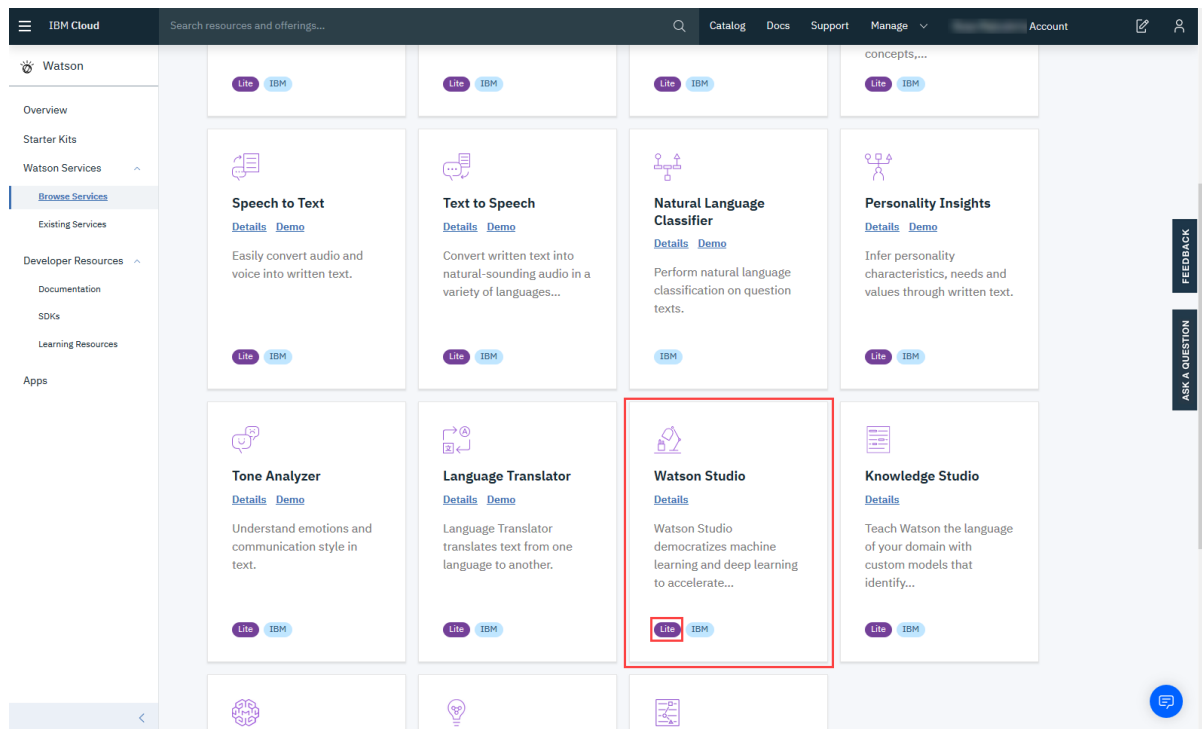
**Convert audio into text**  
Convert speech in multiple languages into text.  
[Get Started](#)

[View all Starter Kits](#) [Browse all Watson services](#)

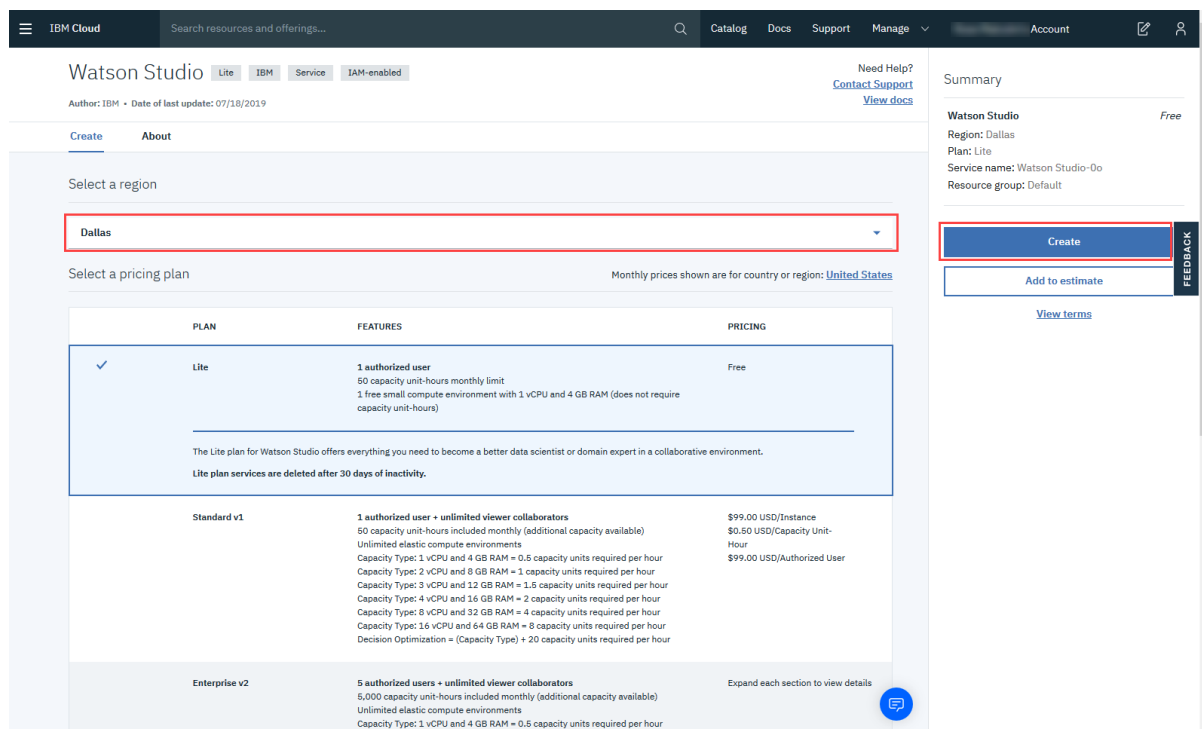
**Consult with IBM**  
Get the most out of your IBM Cloud account by working with our consultants. Learn how to develop for the cloud, leverage Watson APIs, rearchitect an existing application, or experience the design thinking process in action.

**IBM Watson Studio**  
Collaborate to find insights fast. Visualize and manipulate data with code, graphical tools, or APIs. Develop models and neural networks with powerful algorithms and popular frameworks.

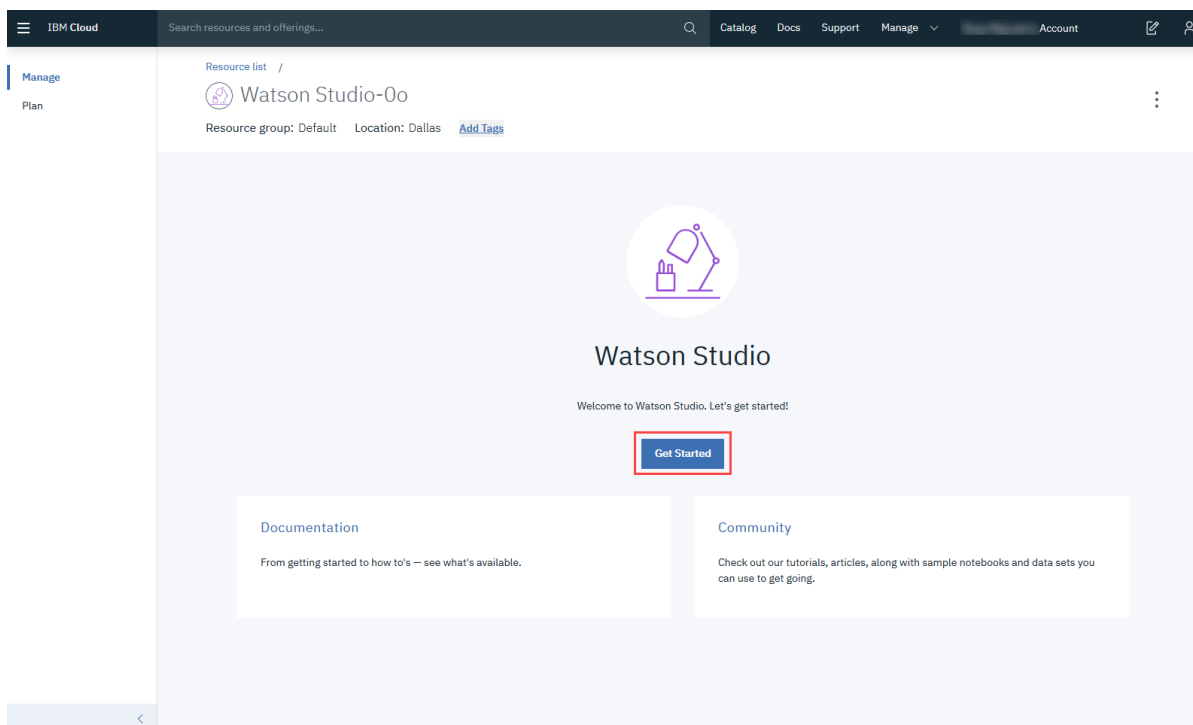
Scroll down and select **Watson Studio - Lite**.



To create a Watson service using the Lite plan, click **Create**.



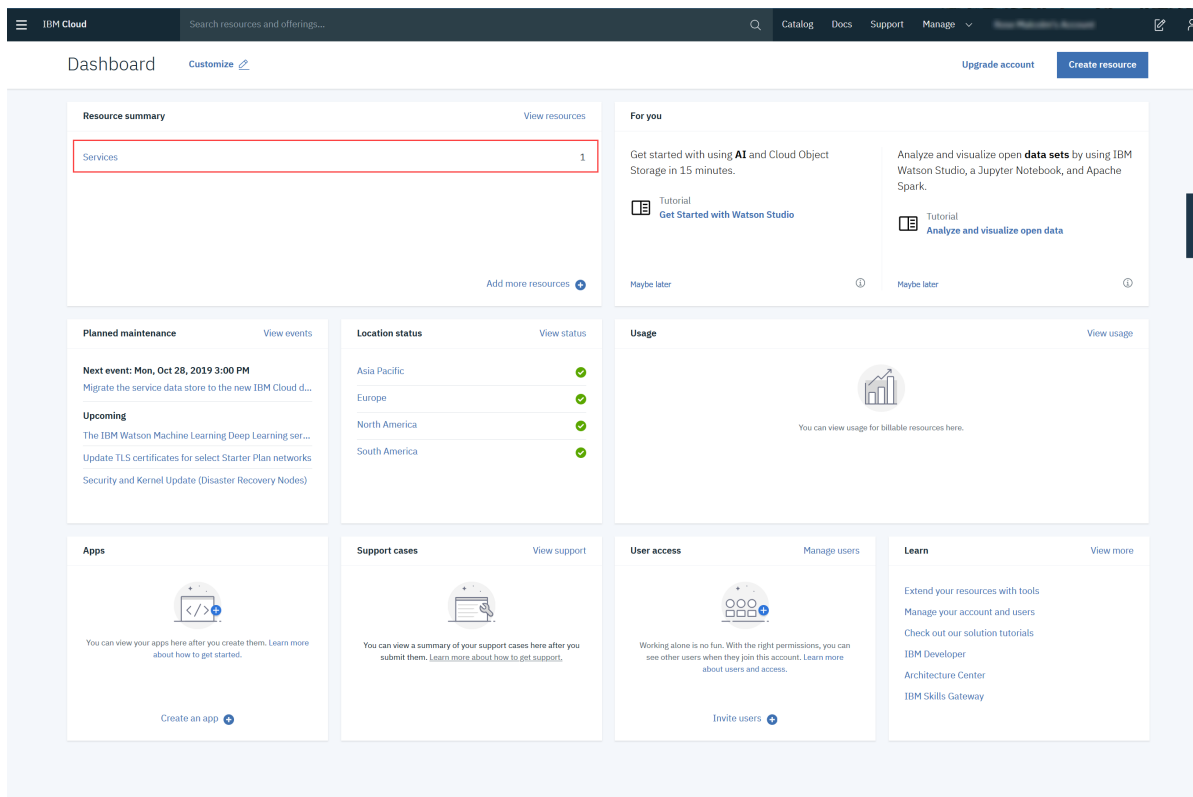
Now click **Get Started**.



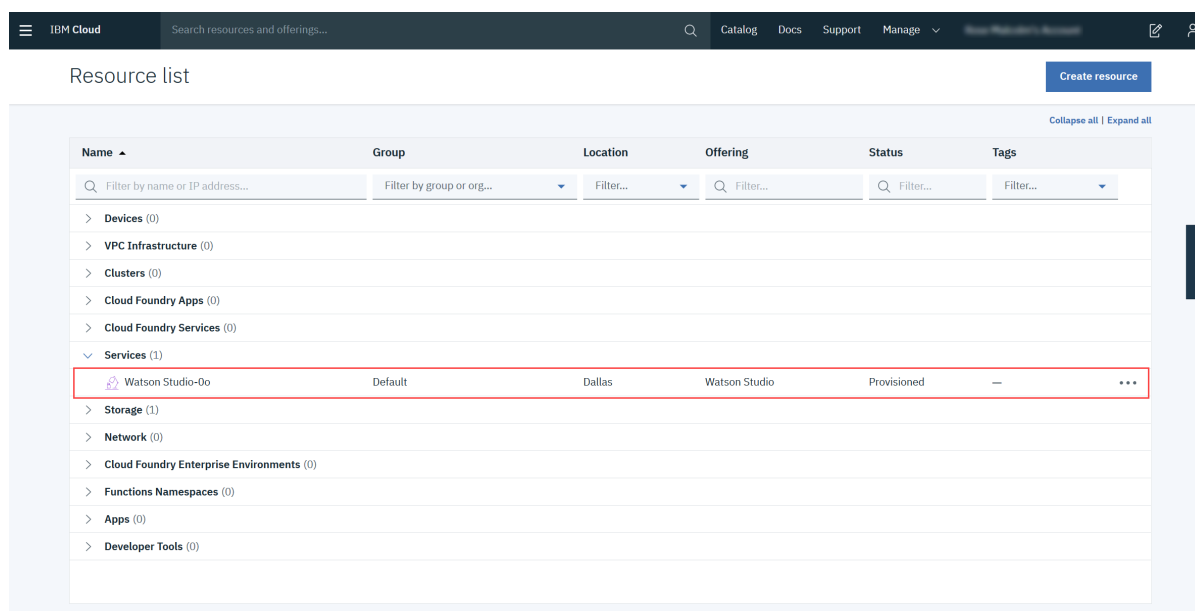
After creating the service continue with Step 2.

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

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



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



Resource list

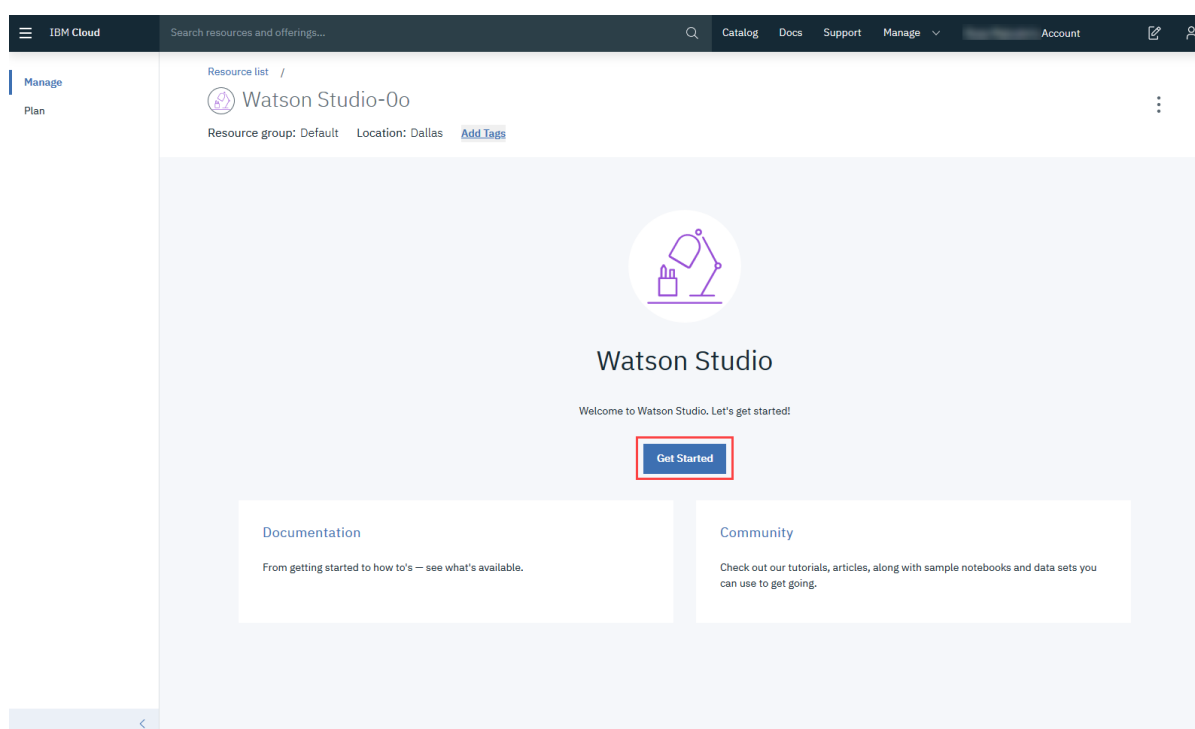
Create resource

Collapse all | Expand all

Name	Group	Location	Offering	Status	Tags
Filter by name or IP address...	Filter by group or org...	Filter...	Filter...	Filter...	Filter...
> Devices (0)					
> VPC Infrastructure (0)					
> Clusters (0)					
> Cloud Foundry Apps (0)					
> Cloud Foundry Services (0)					
> Services (1)					
Watson Studio-0o	Default	Dallas	Watson Studio	Provisioned	—
> Storage (1)					
> Network (0)					
> Cloud Foundry Enterprise Environments (0)					
> Functions Namespaces (0)					
> Apps (0)					
> Developer Tools (0)					

FEEDBACK

Then click **Get Started**.



Resource list /

Watson Studio-0o

Resource group: Default Location: Dallas [Add Tags](#)

Watson Studio

Welcome to Watson Studio. Let's get started!

[Get Started](#)

[Documentation](#)

From getting started to how to's — see what's available.

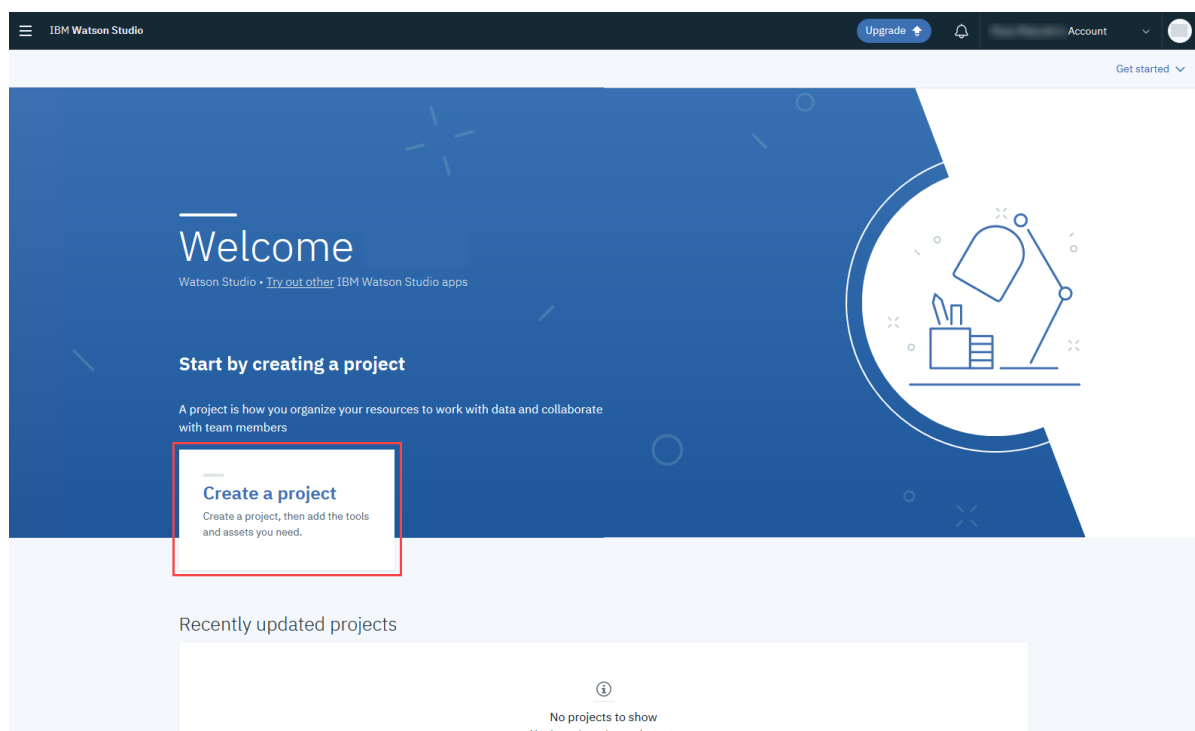
[Community](#)

Check out our tutorials, articles, along with sample notebooks and data sets you can use to get going.

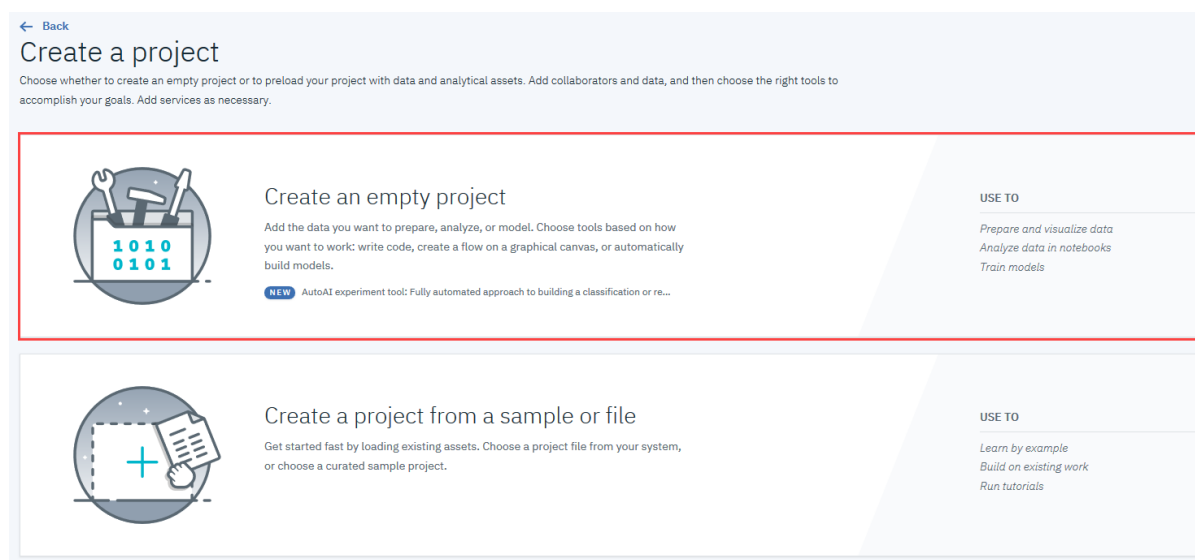
### Step 3: Creating a Project

Now you have to Create a project.

Click on **Create a project**:



On the Create a project page, click **Create an empty project**



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

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

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

Cloud Object Storage

Existing New

### 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 53 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 Tier 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
<input checked="" type="radio"/> Lite	<b>1 COS Service Instance</b> Storage up to 25 GB/mo. Up to 20,000 GET requests/mo. Up to 2,000 PUT requests/mo. Up to Data Retrieval 10 GB/mo. Up to 5GB Public Outbound Applies to aggregate total across all storage bucket classes  The Lite service plan for Cloud Object Storage includes Regional and Cross Regional resiliency, flexible data classes, and built in security.	Free
<input type="radio"/> Standard	There is no minimum fee, so you pay only for what you use.	Expand each section to view details

Cancel **Create**

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

Confirm Creation

Plan

Lite

Resource group

Default

Service name

cloud-object-storage-ai

Cancel

**Confirm**

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

After creating the project continue with Step 3.

### Step 3: Adding a Notebook to the Project:

You need to add a Notebook to your project. Click **Add to project**.

IBM Watson Studio

Upgrade

My Projects / Python Basics for Data Science Pr...

Launch IDE

Add to project

Overview Assets Environments Jobs Deployments Access Control Settings

Python Basics for Data Science Project

Last Updated: 28 Oct, 2019

Readme

**Date created**

28 Oct, 2019

**Description**

This is the Python Basics for Data Science Project.

**Storage**

Cloud Object Storage

0 Byte used

**Collaborators**

View all (1)

Recent activity

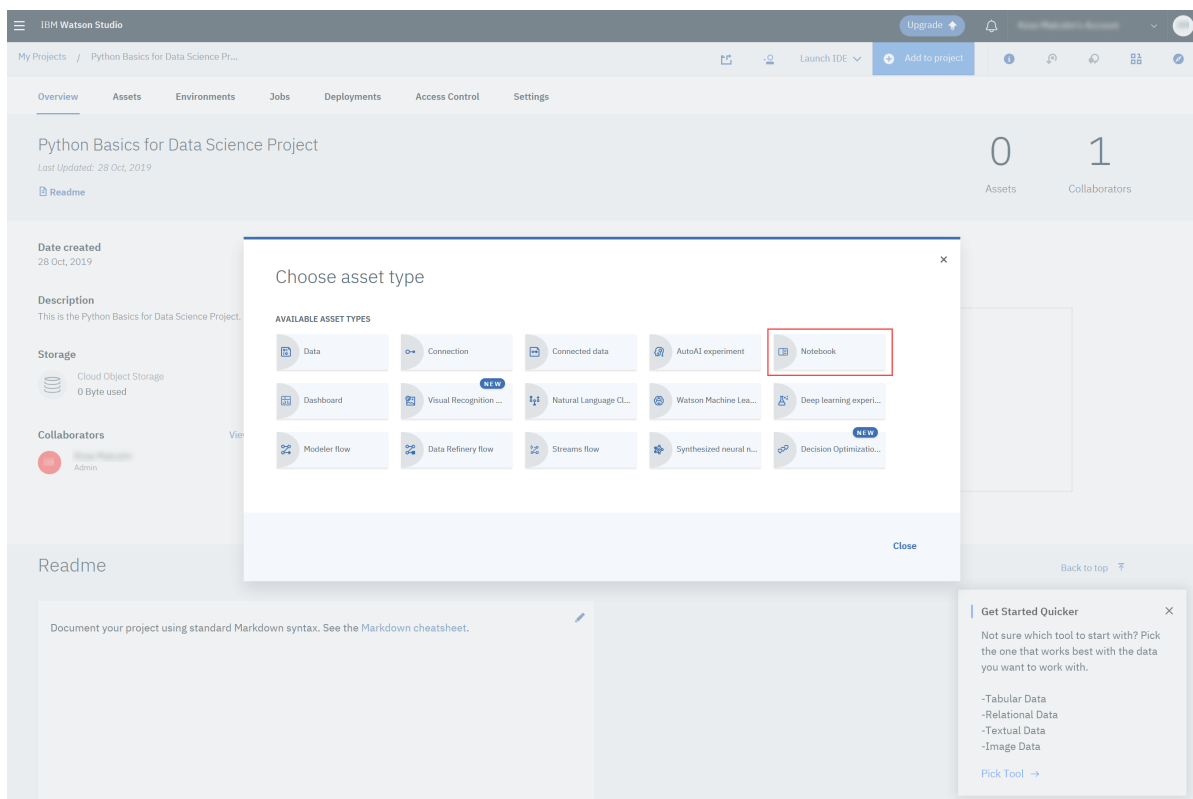
Alerts related to this project will show here when the project is active.

**Readme**

Document your project using standard Markdown syntax. See the Markdown cheatsheet.

Back to top

In the list of asset types, click **Notebook**:



On the New Notebook page, enter a name for the notebook, and then click **From URL**.  
Copy this link:

[https://cocl.us/PY0101EN43\\_EDX](https://cocl.us/PY0101EN43_EDX)

Paste it into the **Notebook URL** box, and then click **Create Notebook**.

You will see this Notebook:

IBM Watson Studio

Upgrade

My Projects / Python Basics for Data Science Pr... / Lab - Loading Data and Viewing D...

File Edit View Insert Cell Kernel Help


Format Markdown

Not Trusted | Python 3.6

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Click Here



### Introduction to Pandas Python

Welcome! This notebook will teach you about using `Pandas` in the Python Programming Language. By the end of this lab, you'll know how to use `Pandas` package to view and access data.

#### Table of Contents

- About the Dataset
- Introduction of `Pandas`
- Viewing Data and Accessing Data
- Quick on `DataFrame`

Estimated time needed: 15 min

#### About the Dataset

The table has one row for each album and several columns

Add Data to Project

Hi there,

Congratulations on getting your project started!

The next step is to bring some data to start analyzing. All collaborators in the project are automatically authorized to access the data in the project. You can add data assets to your project from many sources.

[Learn How](#)